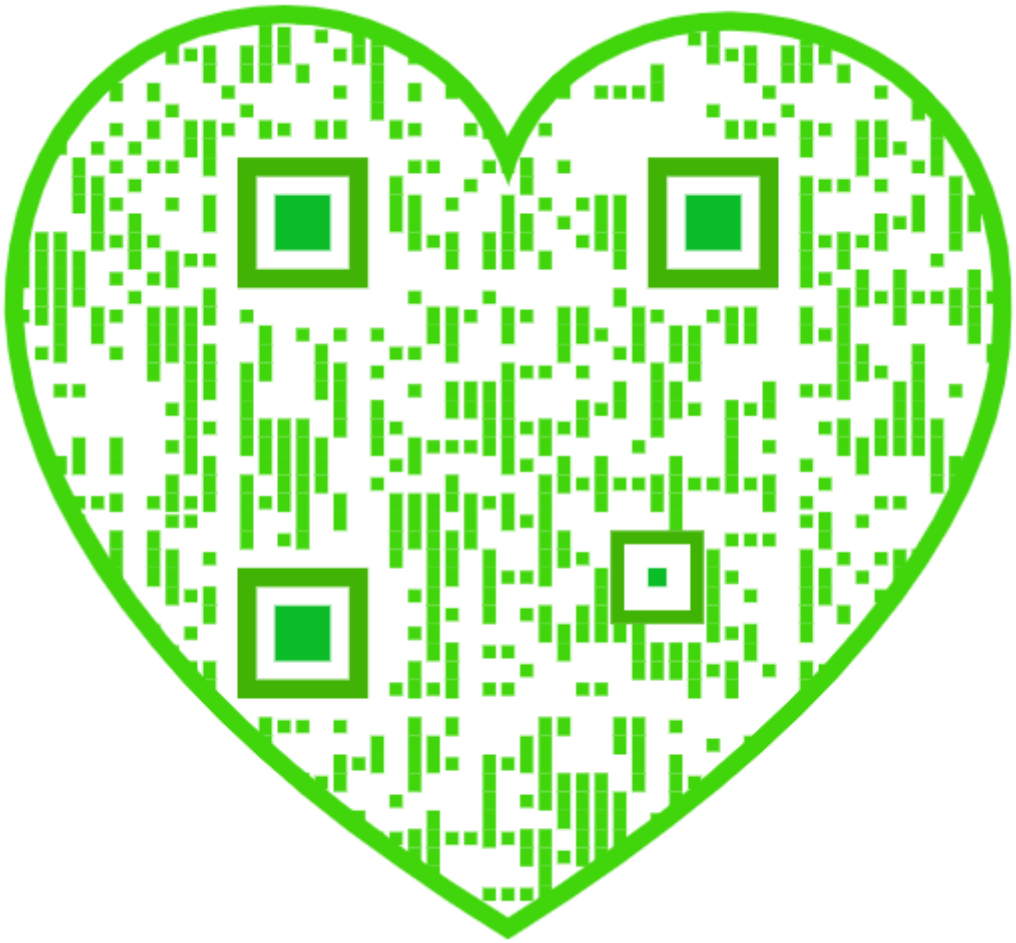

The ARCHITECT AND ENGINEER

APRIL
1930

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WHO'S WHO IN THIS ISSUE

SUTTON & WHITNEY, architects of the Portland Fruit and Flower Mission Day Nursery, pictured elsewhere in this issue, have been established since 1913. Albert Sutton, at that time the senior member of the firm, had previously practiced in San Francisco with Chas. Peter Weeks, under the firm name of Sutton & Weeks. Mr. Sutton died suddenly in the fall of 1923 and the firm has been carried on by Harrison A. Whitney and his junior partners, Fred Aandahl and Fred A. Fritsch. Mr. Whitney received his early training in the Chicago and Boston offices of Shipley, Ruton & Coolidge. In 1901 he entered the Armour Institute of Technology, going to Boston in 1902 where he graduated from the Massachusetts Institute of Technology in 1904. After graduation he came to Portland and worked in the supervising architect's office of the Lewis & Clark expedition, afterwards being head draftsman of the office of Whidden & Lewis. Mr. Whitney has always been active in civic affairs, serving on the Building Code Commission, Contractors Examining Board, Board of Appeals, etc. Among the buildings the firm has designed are the Multnomah County Hospital, Shrine Hospital, Emanuel Hospital, Weatherly Building and Neighbors of Woodcraft Building.

RALPH D. CORNELL, whose article on The Engineer and Landscape Architect appears in this issue, was born January 11, 1890, and while a native of Nebraska by birth, is a son of California by adoption, having made his home in Los Angeles for the past twenty-two years, durwhich time his active interests have been devoted to the study and practice of the profession of Landscape Architecture. After graduating from Pomona College, Mr. Cornell continued the study of his profession at Harvard University, and received the degree of Master in Landscape Architecture. Besides his technical schooling, he acquired valuable practical training in offices in Boston and Toronto. Upon receiving his discharge from some fifteen months overseas service during the war, Mr. Cornell opened offices in Los Angeles, carrying on an active, independent practice for about five years. In 1924, Mr. Cornell was invited to become a member of the firm of Cook & Hall, Landscape Architects and City Planners, and upon his acceptance thereof, the firm of Cook, Hall & Cornell was formed.

ALBERT B. SWINERTON, whose radio talk on the Building Industry is printed in part in this number of **The Architect and Engineer,** is a native of San Francisco, where he was born in 1883. Mr. Swinerton entered Stanford University as miniug engineer. He became identified with the building industry soon after the San Francisco fire in 1906. Practically all of his business career has been associated with Lindgren & Swinerton, Inc. The major work of this firm has been the Y. M. C. A. Building, Olympic Club, Southern Pacific Building, Matson Building, Standard Oil Building, Telephone Building, Hunter-Dulin Building, Hotel Sir Francis Drake, Four Fifty Sutter Building and the San Francisco Stock Exchange, all in San Francisco; the California State Life Building and Elks Building in Sacramento; Griffith McKenzie Building and Mattei Building, Fresno and Camp Fremont, Menlo Park, during the war.

F. W. FITZPATRICK at nearly 70 is as active and as much in things as he was at 30. Architect, author and athlete, Mr. Fitzpatrick for the past 25 years has served as consulting architect to the Government, building corporations, loan companies, owners and architects. In cooperating and collaborating he has passed upon thousands of projects and probably designed more and varied structures than any other individual in the country. His headquarters, now in Chicago, were formerly in Washington, D. C., where for many years he was a special and consulting architect for the U. S. Government. Prior to that he was in active practice in Minnesota, his firm doing most of the important work there from 1883 to 1896. He started in military engineering but switched early to architecture, studied under the best English and French architects and his first efforts in building were in Canada, where he designed structures for the Canadian Pacific Railway. He is a writer of text books and articles innumerable on Architecture—also on many other subjects. He is recognized as a critic of ability, a leader in civic, art and economic matters, an inventor of many worthwhile building improvements and such—the skyscraper, the stepped-back building and fire prevention among other things, and now a brand new form of construction, his Interlocking Channels.

B. J. S. CAHILL is one of few architects who write about their profession. For many years he has contributed articles to The Architect and Engineer. One of his early efforts was an analysis of the Phoebe Hearst University of California Competition. He first edited the Burnham plan, wrote on account of his own Civic Center schemes, one of which was finally accepted by Mayor Rolph and has since written up the work of the late Albert Pissis, and others with special critiques on many notable new building enterprises, such as the Panama Pacific Exposition, the San Francisco City Hall, Telephone Building, etc. These articles have been copied and quoted far and wide. Mr. Cahill's own work has a wide range, from planning the Multnomah Hotel in Portland to designing and managing construction of all the work done by the Magnavox Company of Oakland. His specialty is mortuary architecture, which includes mausoleums, crematories and columbariums. In this field he has done notable work in the Old Odd Fellows Cemetery in San Francisco; Evergreen in Oakland; St. Mary's in Sacramento; and Cypress Lawn in San Mateo County, where he has just completed a large annex to the Catacombs and is now constructing probably the largest Columbarium in the world. He has in charge also the complete lay-out, landscaping and all buildings for Diamond Head Memorial Park in Honolulu. After 20 years work Mr. Cahill has recently completed his octahedral system of world map projection popularly known as the Butterfly Map. The first map in sketch form has now been superceded by the four Variants—the Conformal, the Equivalent, the Orthometric, and the Gnomonic, in which, in turn, Form, Area, Scale and Direction, are mathematically expressed and rigorously computed. This world map is deliberately designed for international use in the interest of radio and aviation problems and all matters pertaining to World Order and Perpetual Peace.

STANTON WILLARD, who writes about the ceramic industry and the architect in this issue, was born in Chicago in 1891. He came to San Francisco in 1908, strongly imbued with the desire to become an architect. He was employed upon his arrival by Bliss & Faville and remained with them until 1918, when he left to serve in the World War. Upon his release from service he sought eastern experience and for this purpose spent several months with York & Sawyer of New York, returning to California and resuming his work with Bliss & Faville in 1920. Later he took charge of the drafting rooms in the offices of Henry H. Meyers and MacDonald & Couchot, of San Francisco, and Walker & Eisen of Los Angeles. Mr. Willard is now with Gladding, McBean & Co., directing promotional work in their sales department in the Northern California territory.

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APRIL
1930

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Contents

FRONTISPIECE—Four Fifty Sutter, San Francisco
J. R. Miller and T. L. Pflueger, Architects

TEXT

Four Fifty Sutter Street, San Francisco 35
B. J. S. Cahill, A. I. A.

The Ceramics Industry and the Architect 57
Stanton Willard, A. I. A.

A Day Nursery 61
Harold W. Doty, A. I. A.

San Francisco's Skyline 64
Edgar N. Kierulff

1933 Exposition Buildings too Gloomy, Says Critic 65
F. W. Fitzpatrick, Cansulting Architect

The Engineer and Landscape Architect 69
Ralph D. Cornell

The Building Industry as I See It 73
Alfred B. Swinerton

Model Types 87
Julian C. Mesick

World's Highest Cantilever Bridge 90
Frederick Earp

The Architect's Viewpoint 96
Charles H. Alden, F. A. I. A.

Late Inventions in the Construction Field 100
Ray B. Whitman

PLATES AND ILLUSTRATIONS

Four Fifty Sutter, San Francisco
J. R. Miller and T. L. Pflueger, Architects

Lower Story Detail and Plan 36
Downward View and Plan 37
South View 39
General View Exterior 40
View of Tower 41
Detail of Upper Stories 42
Detail of Entrance 43
Converging Lines 44
Typical Elevator Lobby 45
Spandrel Over Doors 46
Detail of Elevator Doors 47
Side Entrance Doorway 48
Forms in Metal 49
Detail in Metal 50
Main Entrance Lobby 52
Entrance Lobby 53
Typical Office Suite 54
Entrance Detail 55

Frieze of the Archers in Temple at Susa, Ancient Persia 56
Library, University of California at Los Angeles 58
George W. Kelham, Architect

Building for Fruit and Flower Mission, Portland, Oregon 62-63
San Francisco Skyline 64
Administration Building, 1933 World's Fair, Chicago 65-66
Cascade and Mall, Midwick View Estates, Monterey Park 68-69
Cook, Hall and Cornell, Landscape Architects

Portfolio of Sketches in Rome and Amalfi 79-86
Renato Corte, Architect

Model for Three Houses in Seacliff, San Francisco 87-88
George E. McCrea, Architect

Steel Bridge over Columbia River, Longview, Wahington 91-93

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FOUR FIFTY SUTTER, SAN FRANCISCO, CALIFORNIA

J. R. MILLER AND T. L. PFLUEGER, ARCHITECTS

The ARCHITECT AND ENGINEER

VOLUME CI APRIL, 1930 NUMBER ONE

FOUR-FIFTY SUTTER STREET

SAN FRANCISCO

By B.J.S.Cahill.AIA.

ON this site, for many years, stood the Jewish Synagogue, considered by many San Franciscans to be the most distinctive if not the most beautiful building in their city. Certainly the Temple Emanuel stood supreme among buildings dedicated to the salvation of the soul. The great Medical Building which now replaces it, dedicated, however, to the saving of the body, is likewise a building of tremendous distinction although in every other respect the complete antithesis of its forerunner.

The inspiring motives of the older structure were derived from a prototype in Prague of Old Bohemia with Gothic features in its walls and windows and a touch of the Orient in the ogee cupolas which crowned its flanking towers. Its appeal to the eye was wholly in its form, a heavily buttressed nave, soaring frontal spires and variegated fenestration. In every sense it was of the Old World and entirely dependent for interest on its harmonious shapeliness, because its actual surface was a disappointment; common brick plastered with very dull and muddy looking mortar.

The new building derives its inspiration in its decorative features from the New World, from Central America. It is as devoid of artificial form, deliberate articulation or structural relief as it is possible for any building to be. But the indescribably delicate quality of its surface is its crowning glory, patterned like a brocade, shining like silk and lovely as old lace, a metamorphosis as it were from brick to fabric.

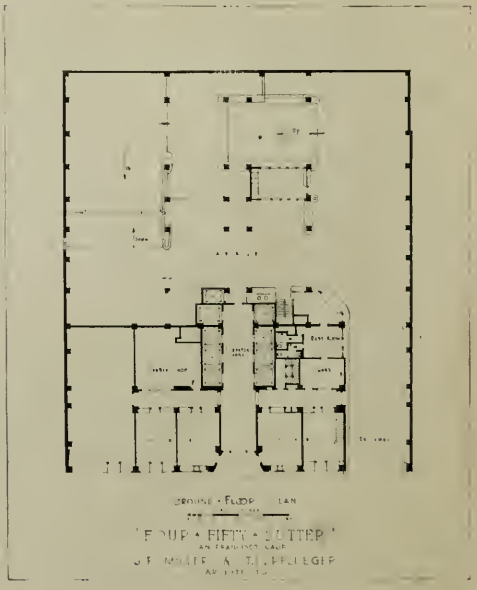
The startling originality of this building from the office of J. R. Miller and T. L. Pflueger in which all architectural precedents seem to be deliberately excluded, need not suggest that there is anything new in striving for newness. The thing is as old as art itself. The writer recalls instructions given him regarding the first design he was called upon to make. It ended in these words—"and above all things try to get away from this classic stuff that everybody's doing."

Architects are always striving for something new, or what they conceive to be new, but their efforts are usually but a reaction from one style to another, as in this particular case alluded to when the painted wooden mill-made homes of San Francisco were giving way to Richardson's Romanesque vogue. This short lived and mild revolt was soon swept aside by the odd mania for copying old masterpieces outright, as practiced in this country by McKim, Mead and White, in turn followed by the far more stabilizing vogue of the French Beaux Arts, the fruits of which are now being harvested.

LOWER STORY DETAIL, FOUR FIFTY SUTTER
J. R. Miller and T. L. Pflueger, Architects

The net results of these tryouts and experimentations have since crystalized to an English or Spanish precedent in our schools and homes and French influence in our public buildings. But what of the skyscrapers, the big city blocks? Perhaps the future historian of American Architecture will quote the German genius as not altogether to be overlooked in our really radical and modernistic developments. The German mind has never wholly reconciled itself to the flowing graces of the Italian spirit. In spite of Goethe's elaborate attempt, in the second part of Faust, to unite the Teutonic and Classic spirits, they are not living happily together and probably never will.

There is an antagonism between the strong, rigid, harsh lines of Albrecht Durer's drawings, for instance, and the grace of Raphael's flowing lines and the charcoal cartoons of the fresco painters. The former drew the draperies and figures, as they really appear, the latter drew them rather falsely but in accord with a preconceived idea, a more elegant abstract "form" in the mind of the artist. In philosophy this is the attitude towards the universe of Schopenhauer or any realist contrasted with that of Plato or any idealist. The rude and often ugly truth from the North is ever in contrast with the sometimes insincere but always charming beauty of the South. The same holds in music where the terrific strength and dissonances of Beethoven and Wagner quite outmode the tranquil strains of Palestrina and Rossini and all that is connoted in the Italian bel canto. German thematic music expresses the facts of life, with pain and strife thrown in, whereas Italian music ignores the painful facts or recasts them in the artificial mold of pure melody. This antagonism moreover, owing to the superior and expansive energy of the Teuton, is dynamic so



that all through history it has again and again expressed itself in invasions and destruction of the static complaisant and artificial South. In time followed recovery and reconstruction. The forms and formulas of Rome are broken up and then reformed. The Re-Formation passes into our own time—the comfortable and accepted things of art and science are rudely broken up and reconstructed on truer lines and the world is saved at needed intervals from formalism and stagnation. Thus the role of the Teuton passes from Alaric to Luther and continues down to Epstein and Einstein to shock and shake our politics and religion, our art and our science out of dry rot, complacency and error.

The supreme example of this in architecture was obviously the rise of Gothic Architecture out of the Romanesque remnants of the Classics. The very name of the style applied by its enemies proves the point conclusively. This, the great Reformation of Architecture, was the very essence of Function expressed by Form.

This line of thought was suggested long ago on the return from Europe just before

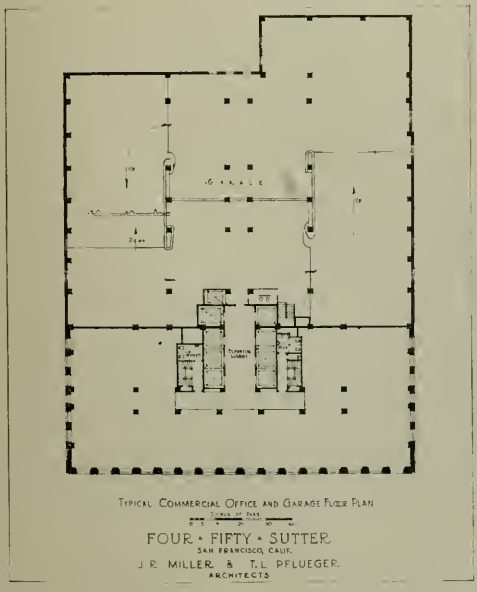
DOWNWARD VIEW, FOUR FIFTY SUTTER
J. R. Miller and T. L. Pflueger, Architects

the war, of a friend who had spent six months in Germany. He reported that German architects were highly amused at the American's devotion to Vignola. No one used the Orders any more over there and the architect who put columns on a building was considered feeble minded.

* * *

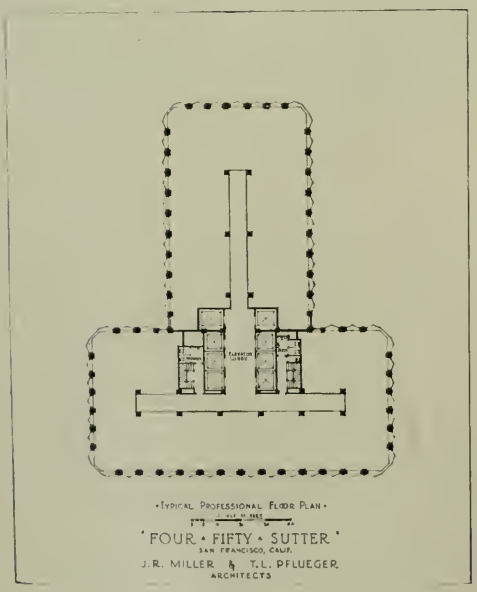
To come down to specific realties we note four outstanding things to consider in this Medical Building on Sutter St., (1) The Spiral Garage (2) The compact plan (3) The exterior finish and (4) the use of Mayan motives in the decoration.

The parking problem is no doubt solvable by two processes, the reduction of excessive


TYPICAL COMMERCIAL OFFICE AND GARAGE FLOOR PLAN
FOUR • FIFTY • SUTTER
SAN FRANCISCO, CALIF.
J. R. MILLER & T. L. PFLUEGER
ARCHITECTS

sidewalks and the construction of garages in new buildings. Both these methods are practiced in most American cities. But the use of the dark interior core in the lowest part of a modern structure, both below and above the sidewalk line, calls for some consideration. With a lot area below a definite size, it becomes necessary to build an auto elevator serving separate floors. More efficient, though only possible in large areas, is the spiral or continuous floor system without any car elevators at all.

In no building known to the writer is this latter system better worked out than in the Medical Building, 450 Sutter, where a continuous floor winds under and over itself through eight stories and accommodates, according to the assistant in charge, just one thousand cars! Since the building has about twenty suites on a floor and twenty-five floors, this allows two cars to each suite throughout. The garage developed around the rear columns of the building occupies a rectangle about 100x138 feet with an added wing at the back of the lot where, two floors above the Sutter St. level, an alley from Bush St. connects with the rear so that the two separate entrances greatly relieve the traffic in and out. The grade in the spiral is not more than 1 in 7 and the floors are ingeniously warped so that cars can turn either in or out from the spiral clearance way and come to an easy rest practically at any point along the entire route with plenty of room and plenty of light, both real and artificial.



The layout of the Medical Building at 450 Sutter is also remarkable for what might be described as the "close planning of the periphery" or the outer edge of the structure from the seventh floor up, which, by the way, is in the form of the letter "T," the stem, however, being at the rear. The girth of both arms is respectively 60 feet and 58 feet six inches across. The first seven floors take up the entire plot and its space, where not taken up by the garage, is allotted to business headquarters for all interests auxiliary to the medical profession. It is above this tall "basement" that the plan assumes the "T" shape and the offices are specially arranged for the members of the medico-dental professions.

The unusual stretch of 60 feet across each pavilion with a hall in the middle would not suit the merely commercial building as planned heretofore, although, no doubt, the tendency now is towards a much larger enclosure of dark space than was formerly the custom. In this particular instance it must be remembered that doctors require many small units in their working quarters and a quite complicated assembly of apparatus and equipment room very much varied to suit the type and specialty of each tenant, whether diagnostician, surgeon, eye and ear specialist, general practitioner, dentist, neurologist and so on. The planning of these subdivisions was done in most cases to suit individual occupants who combined their interest in assured leases to make the total venture a success, both technically and financially.

An imperative need was to keep down the cost and yet yield the very maximum of rentable floor area, to pay interest on so large an investment. Now, it is a geometrical certainty that on any given area made of concentric strips, such as a cross section

SOUTH VIEW, FOUR FIFTY SUTTER, SAN FRANCISCO

J. R. MILLER AND T. L. PFLUEGER, ARCHITECTS

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FOUR FIFTY SUTTER, SAN FRANCISCO, CALIFORNIA

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DETAIL OF UPPER STORIES, FOUR FIFTY SUTTER, SAN FRANCISCO

J. R. MILLER AND T. L. PFLUEGER, ARCHITECTS

DETAIL OF ENTRANCE, FOUR FIFTY SUTTER, SAN FRANCISCO
J. R. MILLER AND T. L. PFLUEGER, ARCHITECTS

through a redwood tree, the outermost ring is the largest assuming them all of equal width. A few inches saved therefore in the thickness of the enclosing walls will yield the maximum addition of space. The periphery of every floor of this building from the 7th to the 27th is 575 linear feet. If by squeezing out all unnecessary wall thicknesses in window reveals (quite often padded out to give a solid appearance to buildings following the "stone" tradition of the usual classic design) we can save one foot, we shall have gained an area in this particular building of 575 square feet which is equal to four room units of 9x14 feet on each floor or 80 such room units in the super-structure alone, the twenty floors above the base. But, substituting the actual plan for the theoretical one considered above and working out the result per window, it is estimated that 10 square feet is saved on each. Since there are 1600 windows in all and assuming the rental at a conservative 25 cents per square foot this works out at $4,000 a month net gain in rental by planning to the edge and eschewing the reveals of traditional design to say nothing of the saving of material on the initial outlay. All this is attained by the extension of each window bay to a point actually outside the building line. Since the bays extend from the outer corners of the supporting columns so as to take in the jamb usually left on the outside, the wall thickness between the columns is the thickness of the casement sash—a little more than one

CONVERGING LINES, FOUR FIFTY SUTTER, SAN FRANCISCO
J. R. Miller and T. L. Pflueger, Architects

inch. This appears on the plan with odd simplicity as a mere line! This line becomes still more interesting at the six vertical edges of the building which have no solid corners at all.

The writer doubts whether any such example was ever carried out so completely and so effectively in any other building anywhere before. It is probably unique. The effect outside is startling; on the inside it is delightful. The panorama from each bay and there are six of them, embraces more than half of the entire horizon. Yet from the strictly structural point of view what could possibly be more logical, more scientific? For, believe it or not, on any floor grid of square panels the corner column carries only half the load of the next side column and not much over a quarter of the load of the next inside diagonal column. It is one of the curious traditions of architectural practice that in designing a rectangular building the corner piers are not diminished as they should logically be, but actually augmented. Undoubtedly if we have a solid corner at all, this arrangement looks better and its validity may be confused in the average mind with the thrust demand of an arcaded system. Furthermore, any architect can recall dozens of cases where a colonnaded facade is purposely flanked on each corner by a whole bay of more solid construction for no other purpose than to give a sense of strength to the whole composition. Moreover it is usual to diminish the openings and so enlarge the

TYPICAL ELEVATOR LOBBY, FOUR FIFTY SUTTER, SAN FRANCISCO
J. R. Miller and T. L. Pflueger, Architects

Photo by Sturtevant

ALUMINUM SPANDREL OVER DOORS, FOUR FIFTY SUTTER, SAN FRANCISCO

J. R. Miller and T. L. Pflueger, Architects

solid area at the end bay to still further enhance the strength seemingly demanded at all corners. This mental illusion seems something of a mystery, perhaps analogous to other illusions of ignorance, such as the motion of the sun, a matter in fact for the attention of psychologists or Mr. Ripley.

Another space-saving wall-thinning device is worked out in the external veneer or finish. With steel columns concreted to their

DETAIL FROM ELEVATOR DOORS, FOUR FIFTY SUTTER, SAN FRANCISCO
J. R. Miller and T. L. Pflueger, Architects

irreducible cross section and the intervening windows pushed out to the limit without any returns, the piers themselves are covered with thin flat rectangular terra cotta tiles scored at the back for cohesion, planted flat on the piers and little over one inch in thickness, including the mortar bedding and necessary wire ties.

In considering the exterior, it will be seen that this careful space saving plays the

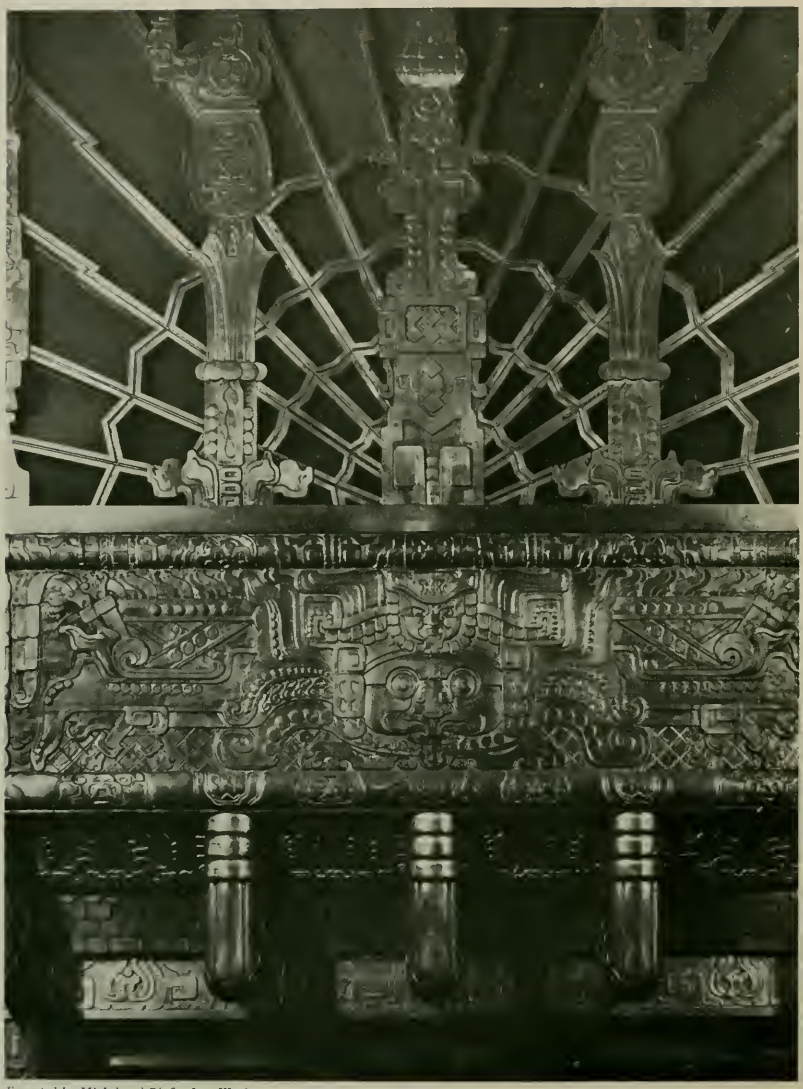
SIDE ENTRANCE DOORWAY, FOUR FIFTY SUTTER, SAN FRANCISCO
J. R. Miller and T. L. Pflueger, Architects

leading role. In fact the whole extraordinary design is, as it should be according to most authorities, based wholly on the logic of the plan and purpose of each floor or rather each group of floors.

Where the stores are entered from the street we have the first system or motif of design done in metal which runs clear across the building and is carried up in the great central portal in the form of a grill

FORMS IN METAL, FOUR FIFTY SUTTER, SAN FRANCISCO
J. R. Miller and T. L. Pflueger, Architects

to foretell and symbolize the lofty shaft of business and professional offices served from this the main elevator lobby. Then come the six next floors of the Sutter Street front devoted to commercial auxiliaries of the medical profession, the space behind containing the garage already described. Above these follow the pipe loft and the end of the "Basement." In this huge plinth block as it were, under the "T" shaped



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A DETAIL IN METAL, FOUR FIFTY SUTTER, SAN FRANCISCO

J. R. Miller and T. L. Pflueger, Architects

tower, the treatment is different from the superstructure. The pilasters are square. The windows, parallel with the front, have a slight angular projection between sill and head, predicting the fuller angular projection to come as we ascend to the third region. And here note again: First the ground floor of stores done in metal, then the commercial offices co-terminous with the base of the building with flat windows; next the

doctors' offices in the main "T" shaped shaft of the building with projecting windows; finally, the short elevator tower, visible only at a considerable distance.

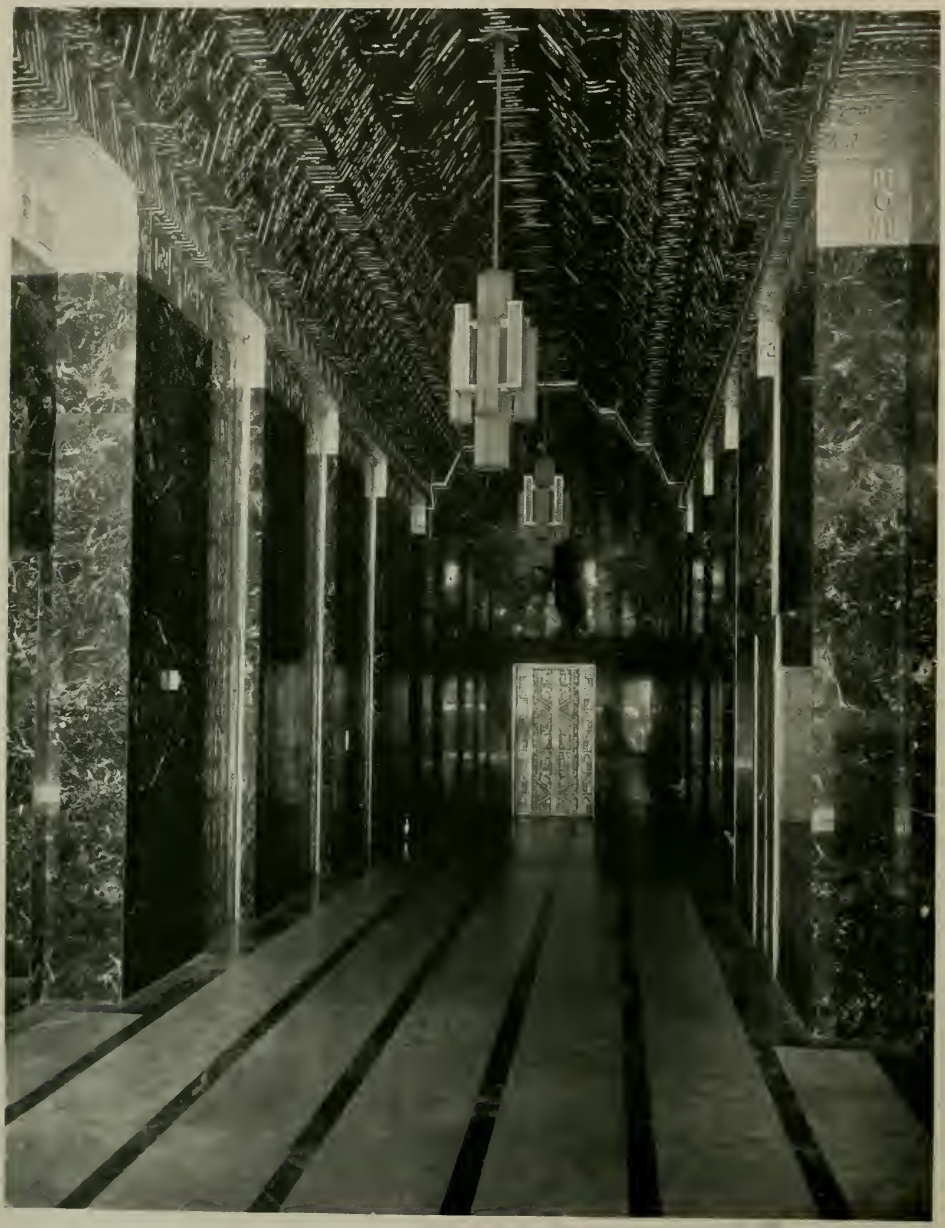
Each of these vertical divisions embracing respectively one, six, twenty and two floors, have varied internal functions and receive therefore a distinct exterior treatment. This of course is the fundamental strength of the design as a whole. To most of us, accustomed to the Latin method of seeking grace of form and proportion at the expense of strict sincerity or blunt truthfulness, which the writer has characterized as a Teutonic quality, this logic of design comes as something of a shock as do the blunt statements of perfectly honest people sometimes. And just as most of us prefer suavity to sincerity in our casual encounters, so most of us like buildings that are superficially decked out with the artificial proportions of the schools, the accepted amenites of traditon. The non-technical reader will better understand this if he will recall the outside of any office building. From the second story up each floor is planned with absolutely identical offices clear up to the roof. Yet the exterior design will show this facade divided into parts with belt courses, arcades, colonnades, entablatures and whole orders to secure proportion, variety and graceful compositon quite unrelated to the inner purpose and function of the building itself. Indeed the main problem of the designer of this applique architecture was to throw a screen of elaborate design around the endless monotony of the fenestration as revealed by a faithful elevation of the office windows as they really would appear; all the same size and all equally spaced. This problem of investing a facade, in reality a grid of rectangular holes, with form and composition, is the outstanding worry of the modern designer.

At Four Fifty Sutter this problem has been solved first by sheer honesty in abjuring all semblance of make-believe, second by courage to face the crude consequences, and thirdly by sheer genius to transmute these consequences from the crudeness which seems inevitable, to an unexpected elegance which seems a miracle.

Many fables of old imply that pain voluntarily faced in a good cause sometimes turns to pleasure. The martyr facing death finds paradise. This transfiguration is beautifully attained in this surprising design. One feels this, but it is difficult to explain, except on the theory that in eschewing the artifcial aids to an old order of beauty one passes as through magic portals into a new order, a new world, where new laws prevail and new standards of beauty shall forever delight us.

It is difficult to adjust oneself to this new order especially for those whose memories are saturated with images of the old. But to those with open minds who are free from sophistication the appeal will by no means be in vain. To many people known to the writer the sight of Four Fifty Sutter is a revelation and a delight.

The initial charm comes from the utter absence of the familiar things which, from age long repetition, no longer move us. But no mere negation or suppression can create much enthusiasm. The design must have positive elements of beauty and interest. This consists in some quality wholly unrelated to the usual architectural forms. We have seen that in the main there are no shadows on the surface of the building. This in itself is remarkable since most of the effects of historical design are based largely on shadows. It was by casting shadows that the design was revealed. We recall also that Fra Angelico painted charming figures on innumerable altar pieces and triptychs and never drew a shadow in any of them. In our California, where sunshine is so glorified, there may be a semi-mystical merit in huge wall surfaces without shadows. In fact on close study one finds that the mass of this building reduced to its simplest expression is a vast precipitous wall with rounded corners and a serrated top. Thin piers with curved faces and rounded corners divide this vertically and between these come the windows, two casements in each, forming a very flat "V," which are continued at sill and head in bands around the entire building. The panels between the window are patterned with incised shallow



MAIN ENTRANCE LOBBY, FOUR FIFTY SUTTER, SAN FRANCISCO
J. R. MILLER AND T. L. PFLUEGER, ARCHITECTS

LOBBY, LOOKING TOWARD STREET, FOUR FIFTY SUTTER, SAN FRANCISCO
J. R. MILLER AND T. L. PFLUEGER, ARCHITECTS

TYPICAL OFFICE SUITE, FOUR FIFTY SUTTER, SAN FRANCISCO

J. R. MILLER AND T. L. PFLUEGER, ARCHITECTS

Mayan hieroglyphics. The entire vast fronts thus give the impression of woven tapestry, alternate bands of shining glass and embroidered tile, crossed by stripes of flatly molded bars rising to the roof. The absence of shadows and the delicate uniformity of this checkered diaper still further enhances this illusion of something soft and silky, a creation of the loom, a giant tapestry hung against the sky.

Most delightful to the eye is the extraordinary, the ethereal daintiness of the color scheme and the variegated texture of the whole which preserves an overtone of smooth uniformity through which endless variety seems to shine and flicker like the unstable markings on watered silk.

The variegated tone of faded fawn in the walls and tile work are continued across the windows whose blinds are a bleached sulphur tone and what small shadows there are take on a touch of orchid grey, probably an optical illusion so that the whole mass has also as one sees it in the sunlight, an infinitesimal tinge of pink. We have spoken of the unfamiliar looking bands of ornament with which the upper building surface is belted through twenty stories. This type of decoration most ingeniously developed from Mayan remains of Yucatan is most interestingly made use of also in the metal walls and grill of the first floor and main entrance.

The interior vestibule and elevator lobby with its prehistoric type of ceiling (made by overlapping huge stone slabs from one wall to another until they met at an apex) all embossed with barbaric symbols of ancient America worked out in aluminum relieved with red contrasting with the dark marble of the wainscot, black in effect, russet in reality, and all flecked with white, makes up an entrance ensemble of overwhelming richness and originality. No one can resist its appeal. But only the professional architect can realize the resourcefulness, the toil, the invention, and the patience to work out successfully so much for which there is neither precedent nor model.

We say nothing of the practical problems involved in so large and so technically equipped a structure as this. The whole enterprise which has taken three or four years to develop and as many millons to build opens up a new epoch. It is undoubtedly destined to influence the development of architecture not only on the Pacific Coast, but throughout the whole country, and perhaps the whole world when, if ever, the whole world builds as we do.

ENTRANCE DETAIL, FOUR FIFTY SUTTER
J. R. Miller and T. L. Pflueger, Architects

FRIEZE OF THE ARCHERS IN TEMPLE AT SUSA, ANCIENT PERSIA

THE CERAMICS INDUSTRY AND THE ARCHITECT

By Stanton Willard, AIA

THE history of ceramics is a fascinating chapter in the study of architecture. What could tell us a better story than the remains of the ancient palaces of Babylon and Nineveh with their walls of sun dried mud bricks, faced with beautiful enamelled tiles, enduring examples of the earliest use of color in architecture? What could provide us with a clearer understanding of the lives and habits of the early Egyptians than the glazed tiles in low relief which lined the tomb chambers of the pyramids? What could give us a more accurate conception of the development of Persian art through the conquests of the Saracens in Syria, North Africa and Spain, than the intricate and beautiful panels and wall decorations in glazed faience tile so lavishly used in those countries? Continuing on with the enamelled terra cottas of the Della Robbias, and so down to the terra cottas and tiles of today, we have a veritable storehouse of information upon which to draw.

In the Renaissance period the architect's functions were comparatively simple. True, he was often engaged in the design, in the sculpture, in the painting, and in active participation in all phases of the work on structures which sometimes consumed a lifetime to build. Such names as Michelangelo, Raphael and Brunelleschi illustrate this versatile characteristic of the architects of that period.

But the architect of today is confronted with a multitudinous array of all sorts of products which go to make the modern building. His problem is becoming greater and greater with the rapid advance of invention and with new developments in equipment, so that much of his work must be taken care of by specialists. He can hope only to keep abreast of the ideas and principles, leaving the working out of the details to reliable and progressive concerns engaged in the manufacture of all the individual units.

Among the several arts allied with architecture, the art of the ceramist takes an important place; his is a highly specialized field. It is one of the oldest of all the arts and with a wealth of material as precedent, the ceramist is able to adapt and modify his work to suit the demand created by progressive architects and artists. His studios have libraries filled with the most interesting collections of color plates. His engineers have developed formulae for new glazes and have perfected the blends of clays. His kilns have been developed to a high degree of efficiency so that a uniform and constant result is to be expected. With the many projects passing through his hands he is ever alert to new possibilities. With his mind concentrated upon his own particular problems he is able to work out details which the architect would have hurriedly to pass by. In the rush of our present day it is impossible for the architect to give adequate thought to all of the details of the component parts of a modern structure. He must turn to those who specialize. He shows his insight by going to the man, or group of men, who show in their particular specialty an insight in sympathy with his own. In turning to the service offered by the wide awake ceramist and relying on

*Abstract of an address by Mr. Willard of Gladding, McBean & Co., before the Northern California Chapter, A. I. A.

Showing the Possibilities of Decorative Tile with Terra Cotta and Brick

LIBRARY, UNIVERSITY OF CALIFORNIA AT LOS ANGELES

GEORGE W. KELHAM, ARCHITECT

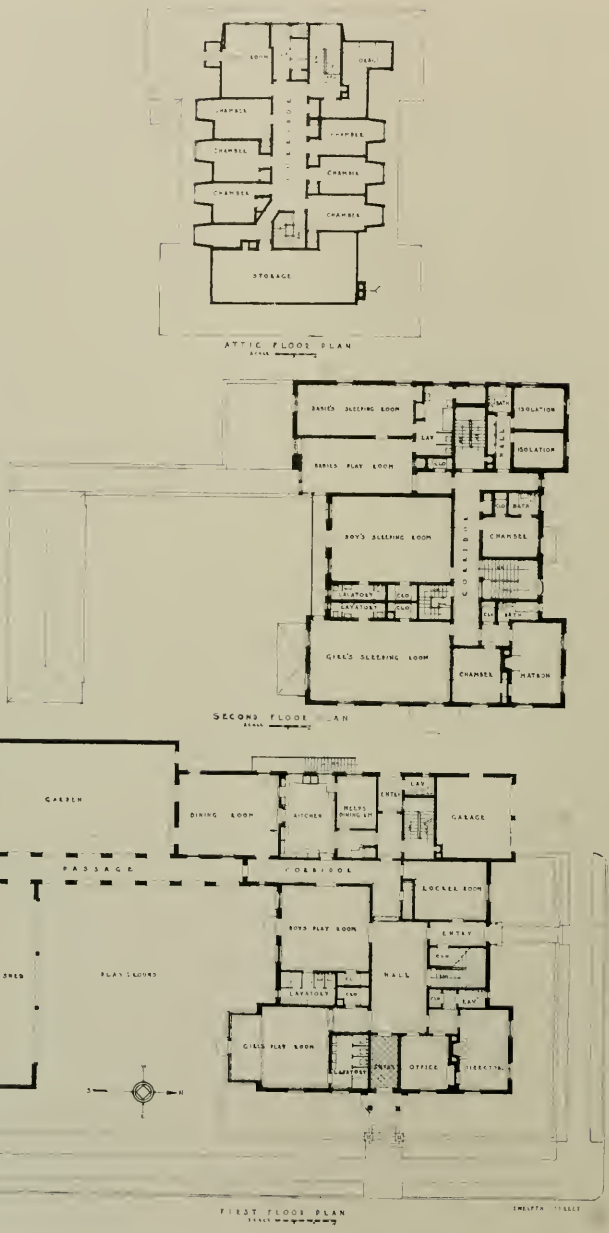
his expert judgment which is born of the knowledge accumulated from a vast number of similar problems, he can feel that he is going to get the best possible solution to his particular problem. In the matter of practical construction, too, the ceramic engineer is in a good position to make suggestions for better building. He knows the advantages and limitations of his material; what to do, and even more important, what not to do. Economies may often be effected in the construction design, and many times a way has been pointed out to an architect who has completed plans without first seeking this co-operation, so that by a change here or there a considerable sum of money has been saved for his client without in any way detracting from the design, simply by the proper arrangement of members and jointing in a terra cotta building.

Modern ceramic concerns have found it not only to their own advantage but to the great benefit of the architect whom they serve, to have in their employ architecturally trained men whose talents are recognized by the profession, men who are able to take the architect's viewpoint, see his problem in correct perspective and help the architect in matters of construction, color and design. By calling these experts in during the preparation of his plans, to go over with his designers the ideas under development, the architect can save himself much time and worry, not to mention expense.

This is not the place to discuss the merits of one style of architecture as against another, but the general opinion is that the so called modernistic architecture is here to stay, at least for a considerable period. This style—if it has arrived at what may be termed a style—calls for a liberal use of color; places special emphasis on the use of manufactured materials; demands special textures and finishes; in short, requires the use of materials which fit in beautifully with the work of the ceramist, for his materials have an appropriateness for the style which so aptly expresses modern times. In addition to meeting all of the aforementioned requirements, ceramic products have the most important quality, that of permanence.

Color in architecture! What a field for architectural expression! Terra cotta, decorative tile, glazed roof tile, what endless possibilities for the use of color in time-resisting materials. The ceramist is in a good position to co-operate with the architect who seeks to create an enduring monument in color. By the early placing of his idea before the ceramist, new experiments can be run hand in hand with the perfection and completion of plans, so that when contracts are let a definite scheme can be adopted at a definite cost and without any unnecessary delay. The ceramist stands ready to produce anything the architect may require in his line—his laboratories are well equipped for experimental work.

While a great amount of promotional work is being done by the ceramist, he is vitally interested in just what the architect wants. Not so many years ago Willis Polk returned from abroad. He was convinced that the same picturesqueness and artistry of color of the tile roofs of Latin countries could be obtained in a modern medium. His thought was expressed to the head of one of California's largest ceramic concerns, who undertook the solution of the problem. This culminated in the creation of a new roof tile far removed from the drab mechanical monotony of tile roof then prevalent. This is co-operation to the fullest extent between the architect and the ceramist. It is productive of the greatest bond of sympathy in the development of new and interesting work in the field of architecture and ceramic art.



PLANS, NURSERY FOR FRUIT AND FLOWER MISSION, PORTLAND, OREGON

SUTTON AND WHITNEY, ARCHITECTS

A DAY NURSERY

By: Harold W. Doty, AIA.

TO see a building possessing a high degree of charm and displaying fine proportions and fitness of detail, with great beauty of color and texture, makes one wish more of the buildings of our cities could be so. To view their pleasing forms is a blessing to our dispositions, instead of, as is most often the case, when we glance at the places which line our streets, the reaction is like a slap in the face.

This is the thought which impressed me when I first glimpsed the very friendly and charming building for the Portland Fruit and Flower Mission Day Nursery, for which Sutton and Whitney of Portland were the architects. This firm has been doing excellent work and unfortunately, this particular example of their skill cannot be treated justly by photographs nor by a short description. However, just to hint at the beauty of the color scheme — the brick work is of a pinkish coral, which varies to darker browns and reds. The roof is covered with Old Stonesfield weathering green and antique slates. The porch roof is lead covered, and the band at the cornice line is whitewashed. All textures are arrived at naturally with no sign of exaggeration anywhere. The interiors are carried out in the same restraint and good taste as the exterior.

The work of the Fruit and Flower Mission is that of caring for babies and youngsters under school age while their mothers work, and is entirely a charitable organization. The children are at the Nursery daytimes only—there are sleeping rooms for nurses, however. Indoor and outdoor play is amply provided for, and there is a flower garden which is of great interest to the tots. A kindergarten room and a refectory are included in the plan.

The total cost of the Nursery was $75,000 which figures 36c per cubic foot. The exterior walls are of concrete faced with brick, and the interior construction is frame. Heating is accomplished by an automatic oil burning hot water system.

In addition to its attractiveness, the building is very well planned, the owners stating after a years' occupancy, that they did not know how it could be improved.

BUILDING FOR FRUIT AND FLOWER MISSION, PORTLAND, OREGON
SUTTON AND WHITNEY, ARCHITECTS

BUILDING FOR FRUIT AND FLOWER MISSION, PORTLAND, OREGON
SUTTON AND WHITNEY, ARCHITECTS

Photo by Mowl'n

SAN FRANCISCO SKYLINE, APRIL, 1930

SAN FRANCISCO'S SKYLINE

By Edgar N. Kierulff.

MANY cities have skylines—not all cities have incomparable situations — very inspiring skylines, but it is a situation beyond all else that makes for impressiveness and beauty in the lofty outlines of modern American cities.

San Francisco is one of the few cities which has both. Sloping hills and water contribute to one of the most beautiful modern skylines in America.

Within recent years, the tall buildings have not confined themselves to the financial and general business district, but have been reared on the high hills back of the bay shore, so that from each point of the compass lofty shafts catch the morning and evening sun, while in the twilight the silhouette of these many windowed residence hotels, apartment houses and commercial buildings is mysterious, inspiring, beautiful.

Five vantage points in the city give the finest and most comprehensive views exclusive of that obtained from the roof of any of the buildings themselves. For the pleasure that any reader, who may be a resident, may obtain, I shall name these vantage points that he may see for himself the beauty that lies within his own city.

From Telegraph Hill, looking southward in the late afternoon; from Russian Hill, looking east and southeast, at the same hour; from Twin Peaks, providing the day be a clear one and from the low hilltops just south of Folsom Street in the morning, as well as the evening hours; from Nob Hill, historic and venerated spot, now claiming a group of its own splendid hotels and residence apartments, a superb view looking straight eastward in the late afternoon and in the twilight.

It is twenty-five years since San Francisco's tallest building situated at Market and Third Streets, the Claus Spreckels — stood almost alone mid the ruins of the

[Please turn to Page 99]

ADMINISTRATION BUILDING, 1933 WORLD'S FAIR, CHICAGO, ILLINOIS
Hugh Ferris, Del.

1933 EXPOSITION BUILDINGS TOO GLOOMY, SAYS CRITIC

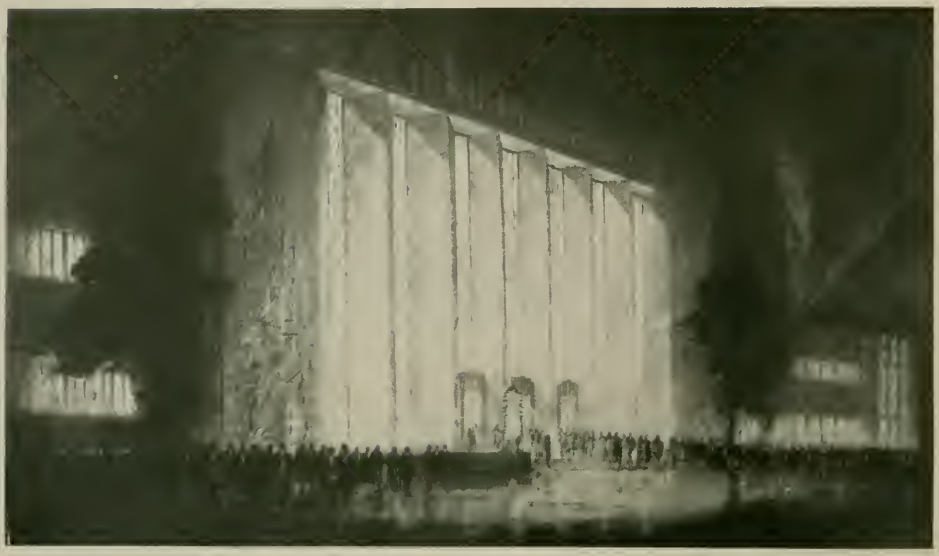
By: F. W. Fitzpatrick

WHEN the first tentative sketches of groupings of buildings for Chicago's 1933 Exposition were published, we knew that the tendency was bound to be away from the orthodox, from all precedents offered by previous Expositions, and certainly toward New Art. The designers are all young men and it is natural to expect they would lean toward the novel, the untried. But I wasn't prepared for the shock given when shown the first sketch for the Administration Building.

My first thought was of a "Bastile" or prison, a cold storage warehouse or a cemetary "incinerator." Bleak, bare and barren! Of course we did not expect columns, entablatures, cornices, arches, tracery, gargoyles or anything of that sort, but neither did we expect what was shown us. An exposition building just naturally expresses something festive, some gladsome national event. We don't usually commemorate a funeral or a stock panic with an Exposition. This building expresses nothing but gloom, flat, unbroken skylines, forbidding mien most funereal.

A huge inverted cigar box, a slice cut out at the side facing us so that a corrugated washboard could be inserted on edge, the inner angles cut open, long strips of glass inserted and there you are. The side wings are composed of three great massive horizontal spandrels or lintels the full length of those wings, with equally long stretches of glass evidently supporting the lintels.

The only thing I ever saw that in any way suggested those wings was a German factory with just such glass supporting heavy concrete beams, acres of it. The whole thing very depressing. True, it achieves



ADMINISTRATION BUILDING, 1933 WORLD'S FAIR, CHICAGO, ILLINOIS

TRAVEL AND TRANSPORTATION BUILDING, 1933 WORLD'S FAIR, CHICAGO, ILLINOIS

"simplicity of construction," the simplicity of some pre-glacial period, or a scene painters' interpretation of some ancient fortification, a section of the Great Wall of China, or of the wailing wall of Jerusalem. Then the Travel and Transportation Building is also shown. "Metal Without a Window," is the description attached (!).

We used to do that some thirty years ago —our galvanized iron grain elevators. Later we made a step forward and substituted great iron or tile or concrete cylinders on end, grouped together, twelve, sixteen or more, a wonderful effect by moonlight! Can that be the objective of this design? Certainly it seems so.

I am unable to make much out of the drawing but the description states there are two large domes without terrestrial support, hung on wires or cables from some nearby walls or poles or towers. Perhaps one is shown in the picture. I took it for a glorified gas tank.

Years ago when Washington Union Station was being planned, they wanted to get away from the old, smoke-holding and gloomy "train shed," so adopted the then new open umbrella-roofed platforms, but the posts down the center of the platform were objected to. So I suggested carrying the roofs on suspension bridge cables from the tops of the building's wings on each side of the trackage. This was much discussed but finally turned down by Mr. Burnham as too "unarchitectural!"

And yet that construction was not "public," the cables could only be seen from the minor office windows of the Station wings each side of the trackage, a bully good, practical scheme, I claim, and one that will yet become popular. Now we're to be treated to that same sort of "construction" in the open, flauntingly open, still just as unarchitectural and freakish as my suspended roofs. Verily "Times do change and with them the views and reactions of the generations, e'en in the one family."

The American Institute of Architects admits that of the four billion dollars worth of building done in 1929, three billion was as good as wasted—poor plans, ugly designs, etc. Methinks the Chicago Exposition is rather tending to add a few million more to that three billions of misspent dollars! Let us pray the other Exposition buildings to come may redeem the two referred to. Yet, I submit, the Administration Building should be the top-notch of them all.

LOUNGE, ST. FRANCIS YACHT CLUB, SAN FRANCISCO
Michael Goodman, Del.

Photo by Whittington *O. A. Gierlich, C. E.*

CASCADE AND MALL, MIDWICK VIEW ESTATES, MONTEREY PARK, CALIFORNIA

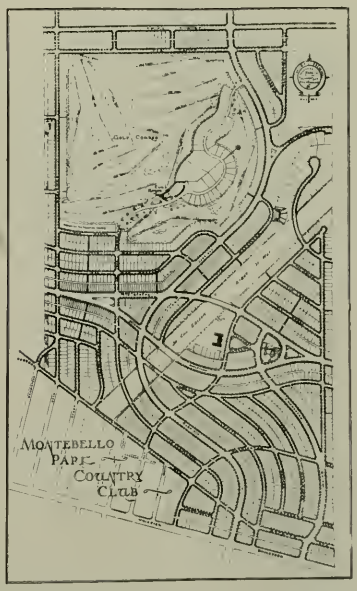
COOK, HALL AND CORNELL, LANDSCAPE ARCHITECTS AND CITY PLANNERS

THE MALL AND CASCADE, MIDWICK VIEW ESTATES, MONTEREY PARK, CALIFORNIA
Cook, Hall and Cornell, Landscape Architects

THE ENGINEER AND LANDSCAPE ARCHITECT

By Ralph D. Cornell

NEVER was a landscape job accomplished but some knowledge of engineering was used in the solving of its problem, simple though it may have been. The basis of every landscape design, from that of the simplest garden to the subdivision of vast acres or the building of a townsite, is topography. And no landscape architect is competent in his profession unless he has at least a conversant working knowledge in matters of topographical engineering, grading, drainage, road profiling and cross-sectioning. His profession demands that he remodel the contours of different areas of land, establish drainage throughout the areas involved, determine the location and gradients of roads and walks, and know sufficient of construction methods to insure the quality of work done. In the normal procedure of his work he contacts problems in hydraulics, lighting, stress and strain on walls, bridges and other structures and the many other things attendant upon design and construction of varied natures.

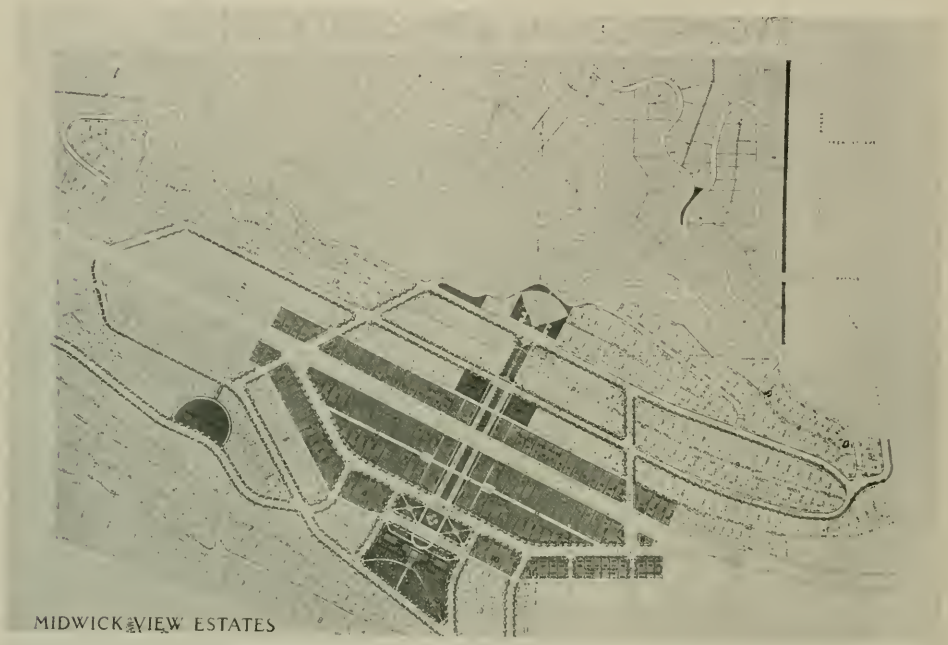


MONTEBELLO PARK COUNTRY CLUB
Cook, Hall and Cornell, Landscape Architects
C. G. Fitzgerald Company, Engineers

Thus the landscape architect becomes dependent upon the engineer. He must be conversant in the lines relating to his work; yes, and he must know something of these various phases of engineering in order to meet his problems intelligently and discuss them with

one more highly specialized and conversant in each particular branch of engineering. But he is *never* in competition with the engineer and *does not* encroach upon his rightful field of activity nor take work away from him.

Engineer and landscape architect should work in cooperative harmony, not as competitors, for each has a distinctive field and certain viewpoint from which he approaches the job, according to his past training. The viewpoints are separate and distinctive, for the engineer sees his problem in a different light than does the landscape architect. Both are right within their limits. But the results are generally better if the two combine their knowledge and merge their viewpoints than if either goes



O. A. Gierlich, C. E.

DEVELOPMENT PLAN, MIDWICK VIEW ESTATES, CALIFORNIA

Cook, Hall and Cornell, Landscape Architects and City Planners

a job bigger than one man in a million can master in a lifetime.

Both engineer and landscape architect undertake many of the same problems. They should work them out together more than is done and not try to spread one man's time and talent too thinly over a large area. For example, road building, subdivision work, town planning of various degrees! We all of us get mixed up in them more or less, and usually pray for more. Each of us has a along without consideration for the other.

The engineer has been trained in mathematical exactitude. He calculates with a slide rule and measures within the fraction of an inch. He sees his job to be that of putting a thing through accurately, so that it will work. He thinks more of structural soundness than of appearance, and an angle where a curve might have been seldom hurts his feelings.

The landscape architect has been taught

to think of appearances as well as function. He is not satisfied that a road have tangents and arcs and proper radii, alone; but he wants the curves to be pleasing to the eye, and the street cross-section to be such that trees can grow along its sides, and he wants it to look well, more or less regardless of whether or not the curves and tangents are correct.

must be sound from the engineering angle but he isn't analysing it in engineering terms alone. His training has included design and art schooling. He has studied plants and soils. He has been schooled in the rudiments of architecture. His concept is a composite picture of many problems and he tries to harmonize them all into a pleasing ensemble.

Daniel S. Halliday, C. E.

GENERAL PLAN FOR BEVERLY HILLS, CALIFORNIA

Cook, Hall and Cornell, Landscape Architects and City Planners

Both are right. But they should move their viewpoints closer together and acquire a composite view of the picture. The landscape architect feels that he is taught to view things differently than is the engineer —although there is nothing at all to prevent an engineer from having the landscape man's angle of approach. For example, in subdivision work, he tackles his problem with the desire to obtain the ultimate in beauty, livability and spaciousness. His plan

But he does not eliminate the engineer. The engineer is his right hand man and they must solve their problems together. It is a fifty-fifty, hand-in-hand proposition. Every subdivision plan that was ever made in our office has had its engineer. And not one of them ever complained on the ground that we took work away from him. All original topography, field work, grade setting, staking, actual running of profiles, estimated cuts and fills and maps of record

O. A. Gierlich, C. E.

PLANTING, FRONT OF ADMINISTRATION BUILDING, MIDWICK VIEW ESTATES, MONTEREY PARK
Cook, Hall and Cornell, Landscape Architects and City Planners

are handled by the engineer. What more could an engineer ask?

The landscape architect determines the general plan of design and road treatment, which he studies over the engineer's topography. He locates open or recreation spaces, school sites, public building sites and any other features; he determines street locations, curvatures, important grade points, cross sections and planting, but he lets the engineer "do the work." They have no conflict. They work together.

The day has come for a high degree of specialization within all the professions. The architect specializes in domestic, business and commercial architecture. There are many different kinds of engineers, each one schooled in his special chosen branch of activity. The landscape architect may devote his chief attention to private estate work, to park design or to city planning and subdivision design. To assume that one individual can master not only the many ramifications, of his own profession but those of his allied professions, as well, is placing him among super-men, of which one encounters occasional, though rare examples. But dealing in averages, and to assume that most of us are human, it seems very logical to state that the most efficient practitioners, in any profession, is he who recognizes his own limitations and is willing to employ the specialized knowledge of his neighbor, as a supplement to his own, toward the best solution of his problem. He is wisest who knows when to call for help and who expresses in his practices, something of the slogan "live and let live." The engineer and the landscape architect should be allies in every sense.

"THE BUILDING INDUSTRY AS I SEE IT"

By: Alfred B. Swinerton

THE construction business is the second largest industry in the United States, being exceeded in value of products only by that of agriculture. It may be divided into two major divisions—the first being that of Building Construction and the second that of Engineering Construction. This latter division includes all construction work other than buildings, such as bridges, dams, irrigation projects, highways and roads, electric power lines, sewer systems, harbor work, etc. The former covers the structures built for housing all branches of human activity, such as homes, apartment houses, hotels, schools, theatres, office buildings, hospitals, stores, factories and warehouses.

It is impossible to give an accurate estimate of the value in dollars and cents of the construction work done yearly in the United States, but it will average under normal conditions of prosperity, a sum in excess of ten billions of dollars for the present decade yearly. This amount does not all, of course, go into the building division of the construction business—probably not over one-third is expended directly in housing activities, the other two-thirds being expended on engineering works, highways, railroads, power projects, etc. In California the volume of building per year amounts to approximately $300,000,000, and, taken as a whole, building on the Pacific Coast is increasing year by year.

The housing of man reaches back in the dim haze of antiquity when the genus homo ceased living in trees and caves and had discovered fire as a protection against carnivorous enemies. He started to build shelters for his family and their goods and stores. In those localities where trees were plentiful, he fashioned shelters of wood. In places where marauding animals were prevalent, he built his house on piles or stilts out of reach of his foes. Where trees were absent, as in the valleys of the Euphrates and Tigris Rivers, and in Egypt, he fashioned his house of sun-dried mud bricks. Thus were created the first carpenters and masons. Where water was scarce, or intermittent, our early forefathers learned to convey water to their fields by ditches, and so were born the first engineers. From these crude efforts have sprung the arts and sciences of architecture, building, and engineering and their infinite ramifications.

Compared with the progress of recent years, the progress of man at first was exceedingly slow, yet, remains of structures of considerable artistic value have been unearthed in Babylonia and Egypt, dating as far back as 4000 B. C.

In the construction of buildings throughout the Middle Ages the designing and the constructing of the buildings were handled by one man. Today being a time of high specialization these functions have been divided into those of an architect, a builder, and an engineer. The architect is the general designer of our buildings but he must have the cooperation of engineers in order to complete his plans and specifications. He must employ a structural engineer who designs the frame upon which the architectural motifs are dressed. He must employ a mechanical engineer to design the plumb-

ing, and ventilating systems, and an electrical engineer to lay out the various elements of electrical work which are incorporated into the modern structure. After the work of these specialists has been completed the builder must be called in to estimate the cost of the work and to construct the building. The builder himself cannot do all of the things necessary in the construction of the building and must himself call in specialists on the various lines of work which are incorporated into the whole. I will speak further on divisions in the building industry a little later.

It is probably difficult for the lay mind to realize that the building industry is not isolated and apart from other industries of the country. Such is not the case. The building industry deals with practically every basic industry in the country and relies upon them for its materials, as they rely upon it for markets. Probably the chief market for the lumber business is the building industry. Billions of feet of lumber are consumed annually in the construction of buildings. The fireproof building of today, which contains little or no wood in its final composition, utilizes millions of feet of lumber in the form work for the concrete foundations, floors and walls which are permanent parts of the structure. The iron and steel industries are vitally interested in the building industry as the latter is probably their largest individual consumer. The mining industry as well relies upon the building industry as consumers of copper, lead, iron, building stone, clay, gypsum and other products of the earth. Likewise the electrical, machinery, glass, paint, plumbing supplies, and hundreds of other industries depend upon the building industry as their main customer. Lastly, the transportation systems of the country would feel deeply any slacking of the building activities of the country as the transportation of the commodities for buildings furnish a large part of their freight income.

The tendency in building construction is to use more and more steel and it is very probable that the skyscraper of the future will be composed almost entirely of steel and glass.

Concrete is probably next to steel in importance in modern construction work. Concrete is composed of crushed rock or gravel of various sizes and finer aggregates such as sand and cement.

The construction of a modern building is divided into the following major activities:

Excavation, piling either of wood, concrete or steel, structural steel work, masonry work, concrete work, carpentry work, roofing, lathing and plastering, sheet metal work, hollow metal work, hardware, glass and glazing, ornamental iron and bronze work, marble, tile, painting, elevators, electrical work, plumbing work, and heating and ventilating work.

As I have stated before, the builder must have available experts versed in the various crafts above named. No builder can hope to himself do all of the work that goes into a building. As a rule a master builder will execute with his own forces the excavation work, concrete work, masonry work and carpentry work and will call in as his assistants individuals and firms competent to handle the other branches of the work. Any one of these crafts calls for expert knowledge and experience and each offers a field for the young man or young woman who feels the urge or call of the construction business in his or her veins. Volumes could be written on each one of these crafts and I have neither the time nor the ability to discuss each one separately with you and must necessarily confine my remarks to the subject of the builder and to what attraction there is in his field for the youth of today.

The man who is first called in on a building project, and the one whose field presents the most alluring picture to the creative mind is that of the architect. The architect is a creator and has the unique advantage of seeing his visions translated into the realities of steel and stone, wood and glass, marble and tile. The opportunities which this vocation holds are unlimited. The architect's work is purely individualistic and his success is entirely dependent upon his own efforts and ability. To become well

founded in architecture requires a period of study of from four to ten years and the field is open to women as well as men.

To become a successful architect, a student must have artistic ability, a fine sense of proportion, and a sound knowledge of the elements entering into the construction of buildings. There are many architects who are artists but lack the ability to incorporate into a building the commercial elements necessary for it to have to fulfull the purpose for which it was designed. There are other architects who are extremely practical but lack the inspiration to conceive a harmonious and pleasing composition in their work. A combination of artistic ability, technical knowledge and common sense are necessary to the man who would become a successful architect. The Pacific Coast in general, and San Francisco and Los Angeles in particular are fortunate in having in the architectural profession men who stand far above the average of their profession, and the results of whose ability may be seen on every hand in the edifices of the Pacific Coast communities.

When the architect has completed his plans to a point where building operations can start, the builder is called in for the actual construction of the proposed project. He is either selected on the basis of his past reputation and performance, or secures the work through competitive bidding. Each building project has a new problem to offer and building in general has no humdrum aspect. To both the architect and the builder there is the lure of something new in every building. Both the designing and the building are fascinating work and create in those who love the work an enthusiasm that would be difficult to exceed. They both have the pleasure of creating and producing a structure which is a visible evidence of their efforts. The completed building brings to the builder proud memories of his careful planning with regard to the time element, the cost element, as well as the coordinating of the various trades and agencies that go into the work which result in the best building possible for the money expended, erected in the shortest amount of time and with the least amount of friction.

There are many eminent builders who have not had an engineering education but who have learned their craft in the hard world of experience. However, a sound engineering education is the best basis upon which to build a building career. This education is invaluable in the field work, as the construction business calls for no little engineering knowledge in the manifold problems which come up every day in the erection of buildings, I would, therefore, advise the student who desires to follow the building profession in later years to get as thorough an education along engineering lines as is available. He should then start in the field in whatever capacity is open to him. It may be that of the common laborer, material clerk, timekeeper, or an apprentice in one of the crafts. If he will keep his eyes and ears open he will learn in the course of several years the major problems which face the builder in the field. He will also be able, if he is assiduous, to keep a rough check on the costs of the various elements of work which go into a building. After going through the construction of several buildings in one of the capacities listed above, he will, with his engineering knowledge and familiarity with blueprints, be able to step into the role of an estimator in the office of some builder. After several years of experience in this line, he can step up to the position of an operative man, having charge of one or more pieces of work for the building concern with which he is identified. He will in this position do the major portion of the buying for the jobs that are entrusted to him, select and handle the personnel on the work, and act generally as the representative of his concern in contacts with the Owner, the Architect, Subcontractors and material men; and from this point on he can step out as an individual builder, or as one of the officers of a larger concern.

All of the foregoing experiences are essential in the education of a successful builder, but, above all, he must be a man of unquestioned integrity. His position is one of trust. The owner and architect look to him to do an honest piece of work, he is handling large sums of money for his

client, and he must be scrupulous to the utmost degree in the handling of funds entrusted to him and in the execution of his work in an absolutely honest way.

Builders as a class have had, in the past, a reputation for dishonesty which has been placed upon them through isolated examples which have become public knowledge, of dishonest practices employed by individuals. I have been in the contracting business for twenty-four years and have seen the rise and fall of many contracting concerns, and I can state from my own experience that only those whose work was honestly done have withstood the test of time, and those men and firms who resorted to other methods for gain than that of honest work, have all passed out of the picture.

The builder must have a sound knowledge of many other things which are, in the public mind, disassociated from the building business. He must know something of real estate values, of banking and finance, insurance and building law. He is often consulted on what is the best type of building to place upon a certain piece of property in order to develop it to a point where it will produce the highest income possible. He must know the going value of rentals of the various types of buildings so that he can advise his clients intelligently. It will, therefore, be seen that a man at the head of a building concern must be a real executive and have a foundation both in engineering and of experience in field work, which will enable him to intelligently direct the various forces under him. To many students the field work will be equally as attractive as the executive end of the building business. After a man has had the field experience as a timekeeper or material man, it is possible for him to step into the position of foreman and ultimately to that of superintendent of building work.

The most successful superintendents are those who have been successful foremen in one of the branches of the work connected with the erection of the building, and while an engineering education is not essential to the man who is aiming to become a superintendent on building work, it will be a big aid to him all of his life. A successful foreman or superintendent must know his craft thoroughly. He must also have the ability of a leader so that he can handle large crews of men and get from them the results which are necessary in order to keep the costs of a building within the prescribed limits. He must be able to sympathize with the problems of the men under him, feel with them, and to know when a man is working and when he is shirking. He must be a man for whom his workmen hold the highest regard. He must be fair in his treatment of them and must not be interfered with by the builder in the handling of his men.

* * *

At this point it might be well to follow through the history of a building as it is built. On most large jobs the builder is called in shortly after the inception of the project to consult with the owner and architect in the selection of materials and to make estimates as to the ultimate cost so that the design may be made consistent with the funds available for the project. The builder will, as soon as possible, prepare a careful progress schedule, or time schedule for the work, which outlines the period over which the job is to extend. This schedule gives the starting and finishing dates for each craft on the entire building. The problem is minutely analyzed and the dates for ordering of material, as well as the starting of the work on the building site, are carefully plotted. If the building is a steel structure the first purchase made is that of the structural steel, as this material, in order to get the best prices, must be ordered from the mill, shipped to the fabricating shop and there fabricated ready for erection. This will take from ninety to one hundred and twenty days on the ordinary building. The excavation work is started so that it will be completed and the foundations installed at a date coincident with the completion of the fabrication of the structural steel.

* * *

As soon as the plans and specifications for the building are completed the builder makes a final and careful estimate of the cost of every element in the building and

as soon as the work starts the actual results day by day in the field are checked against the estimate so that the builder, architect and owner may know whether or not the cost is being kept within the estimate for each branch of the work. In the meantime the office of the builder is busy preparing orders for materials required, and taking bids from subcontractors on the work which the builder cannot handle with his own forces. These subcontracts are awarded to the lowest responsible bidders and their amounts checked against the preliminary estimate and, in the event that any of them overrun the estimate, the architect and owner are consulted with a view to making such changes as will keep their cost within the budget setup. In the awarding of the subcontracts the builder's knowledge of building law comes into play. There are certain essentials which every contract must have if it is to be legal and valid. Great care must be exercised by the builder in the preparation of the contracts in order that they cover and include all of the points which were intended to go into the contracts and to make sure that both parties mutually understand all of the requirements. The subcontractors are generally required to furnish a surety bond guaranteeing that they will complete the contract according to the terms thereof and for the price stipulated therein, and furthermore, guaranteeing that they will pay for all labor and materials placed upon the work by them. All of this work is merely preliminary to the construction of the building and the real work has just begun. The successful execution of the work requires constant expediting of materials and following up the work of the subcontractors by the builder. In accordance with the progress schedule there is a definite time placed for each piece of material to be on the job and for each operation to start and be completed. Some materials are obtained locally, while others have to come from opposite ends of the country and even from overseas, and their purchase must be made in such time so that their arrival will coincide with their need on the building. As I have stated before, the structural steel must come from the mills in any major operation, and the marble may have to come from Italy.

* * *

During the life of a job the main office of the builder must work hand in hand with the field organization. They must at all times be in constant touch with the field office forces. The success of any job depends largely on the selection of the field superintendent. The latter is in complete charge of all operations in the field and is called upon daily to meet emergencies which arise. A good superintendent is a competent organizer and is capable of directing the various subcontractors' forces as well as the builder's own forces so that the work proceeds methodically and economically. His ability to organize and direct his forces is directly reflected in the labor costs which are obtained on the work. There must be team work between the superintendent and his men, the subcontractors, material men and the main office of the builder, in order to produce the results which are necessary.

On tall buildings especially, the safety work is most important. Some of the operations on building work are extremely hazardous in their nature and unless proper safety measures are taken the building will be the cause of deaths and accidents which can be prevented. Not only is it the duty of a builder to see that every precaution is taken for the safety of his workmen from the humane viewpoint, but it vitally affects his pocketbook and that of the owner. It is the law in California that an employer of labor must insure his employees against accident. The insurance rates which he pays are based each year upon the experience which his organization has had during the preceding three years, and the rates of builders vary in accordance with this experience which is termed "experience rating". In 1920 our firm had an experience rating of 120% of the Manual Rate, in other words, we were paying 20% more for our insurance than the normal rate. By the employment of a safety engineer, who has full charge of the safety division of our work and who has full authority over the superintendents on the job insofar as safety

work is concerned, we have been able to reduce our rating to two-thirds of the Manual Rate. This saving amounts to $3,000.00 per $100,000 of payroll. Furthermore, when a man is working under safe conditions he will produce a great deal more per day than if he is in constant fear of accident so that the intangible saving is even greater than the actual saving in insurance premiums. I have known instances where builders were paying in excess of two and one-half times the Manual Rate owing to their carelessness in the handling of their work.

The builder, or operative to whom he delegates the work, has daily conferences with the superintendent, both of them looking to the ultimate completion of the work and foreseeing the needs and obstacles which may develop to delay the completion of the work within the allotted time.

The only stock-in-trade which the successful builder has is the commendation of clients for whom he has done work and it is only by building up a corps of such satisfied clients that he can hope to succeed in the future.

* * *

Building work is done on two bases, as I have stated before—one under which the builder acts as agent for the owner and is financed by the owner in the construction of the building, and the other method is to build upon a flat contract under which the amount the builder makes on his work depends upon the amount which he can save in its erection. This letter method is the form under which all government, state and municipal work is done, and by which method much private work is also done. It has the fault that the interests of the owner and the builder are diametrically opposed but has the advantage that the owner knows the absolute outside cost of the work. Under this form of contract every sack of cement and every nail which can be saved from the building are profit to the builder, and from a mercenary viewpoint the builder has every incentive to do as poor a job as it is possible for him to get away with. From a financial viewpoint he must have sufficient capital or credit to enable him to finance a portion of the building cost during its construction as he is generally paid three-fourths of the cost of the work as it is done, the remaining 25% being withheld until after the building is completed and accepted. On large size contracts this runs into a great deal of money.

On the other hand, the builder, who by honest work has built up a reputation which warrants confidence being placed in him, can secure work on the basis of the actual net cost thereof plus a fee and raises himself into the field of a professional man. Under this method of building the owner pays the cost of the work as it progresses and the builder need have but sufficient funds to meet his weekly payrolls and overhead expense. His success in business will depend upon his own efforts and integrity.

* * *

The Pacific Coast is, in the opinion of most thinking men, on the verge of an enormous industrial expansion. This means buildings, not only factories, but homes, apartment houses, office buildings, hotels and all structures which are necessary for the housing of industry and of the people connected therewith. We are particularly blessed with a climate which enables men to work productively every day in the year with the result that the larger industries which have in the past confined their manufacturing activities to the eastern half of the country, are beginning to establish branches of their industries on the Coast and often in more than one strategic position thereon. This means that the volume of building business will increase, that our population will increase and that its needs will be reflected in the prosperity of the building industry.

Our labor costs on the Pacific Coast in the building business are less per unit produced than in any other portion of the United States on account of the fact that our weather is such that the work is not retarded by either extreme heat or cold or by excess of inclement weather. We are also freer from labor disturbances than is the general condition throughout the country. San Francisco and Los Angeles work on what we call the "American Plan" in the building business, under which plan a

man may secure work irrespective of his labor affiliations. This means that an industry may be established on the Coast without dictation to the promoters and owners thereof as to working conditions, production, efficiency, and jurisdictional disputes, which have in years gone by been a deterrant to the investment of capital in this district.

The wages to be paid to various mechanics and journeymen are fixed each year in San Francisco by an Impartial Wage Board composed of disinterested citizens who have the best interests of the community at heart. Any workman who receives less than the minimum wage set by this Board may report it to the Industrial Association in San Francisco and the conditions will be corrected. Likewise the Merchants & Manufacturers Association of Los Angeles is organized to keep a harmonious labor situation permanent in that community.

Building work throws one in contact with all classes of society from the laborer in the field to the leaders of industrial business and banking. A successful builder must be able to conduct himself equally well with all. The money which the industry offers is small at first, as in any other line of endeavor. Its ultimate reward will depend not upon which branch of the industry he pursues, as they all afford opportunities, but will depend upon the man's adaptability to the business.

The building business, it must be remembered fluctuates much more than those industries which are supplying the daily needs of man. During prosperous times building is brisk, and during times of depression the business suffers much more than many other industries. The organization of a builder must be elastic so that he can reduce his overhead expense when necessary and build it up when business offers. To counteract this instability there are many attractions — the variety of problems encountered, the absence of monotonous routine, the broad scope of the work, the opportunity for travel, the thrill and pride of creating something of permanence and beauty, and playing a part in the progress of the community, all of these join to make this business a fascinating one.

WOMEN'S LOUNGE, ST. FRANCIS YACHT CLUB, SAN FRANCISCO
Michael Goodman, Del.

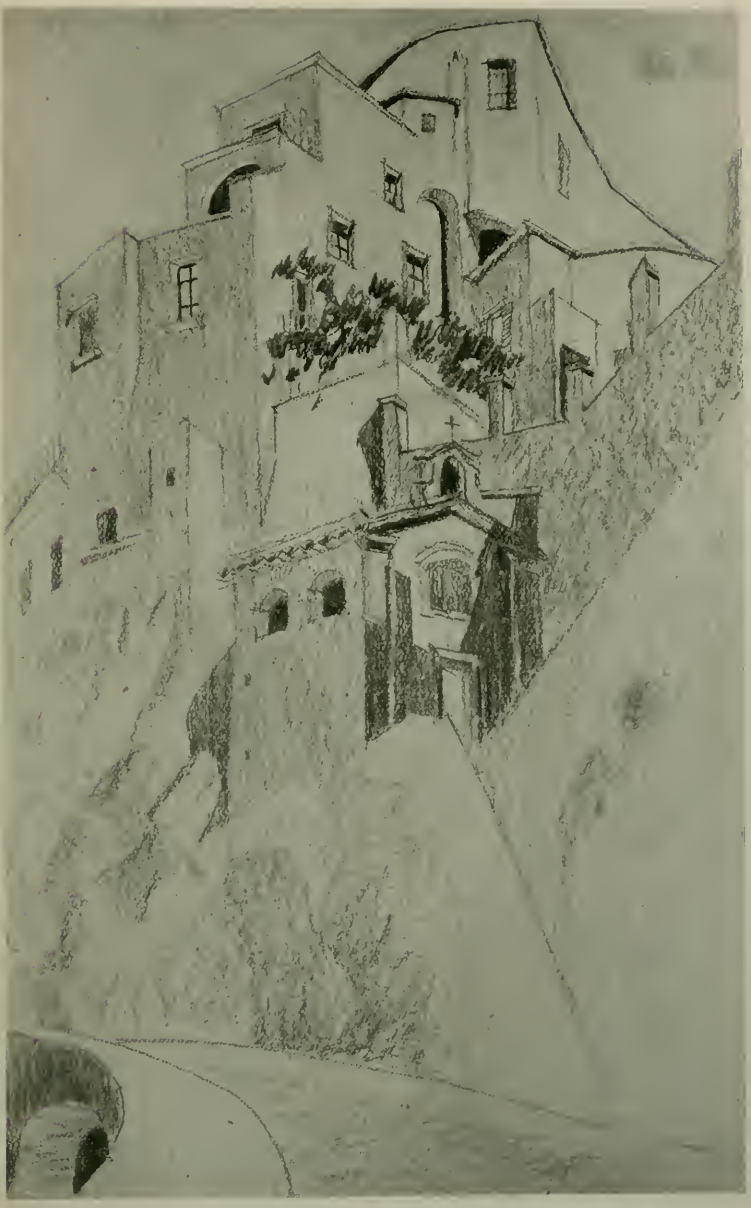
Portfolio of

Sketches *in* Rome *and* Amalfi

by

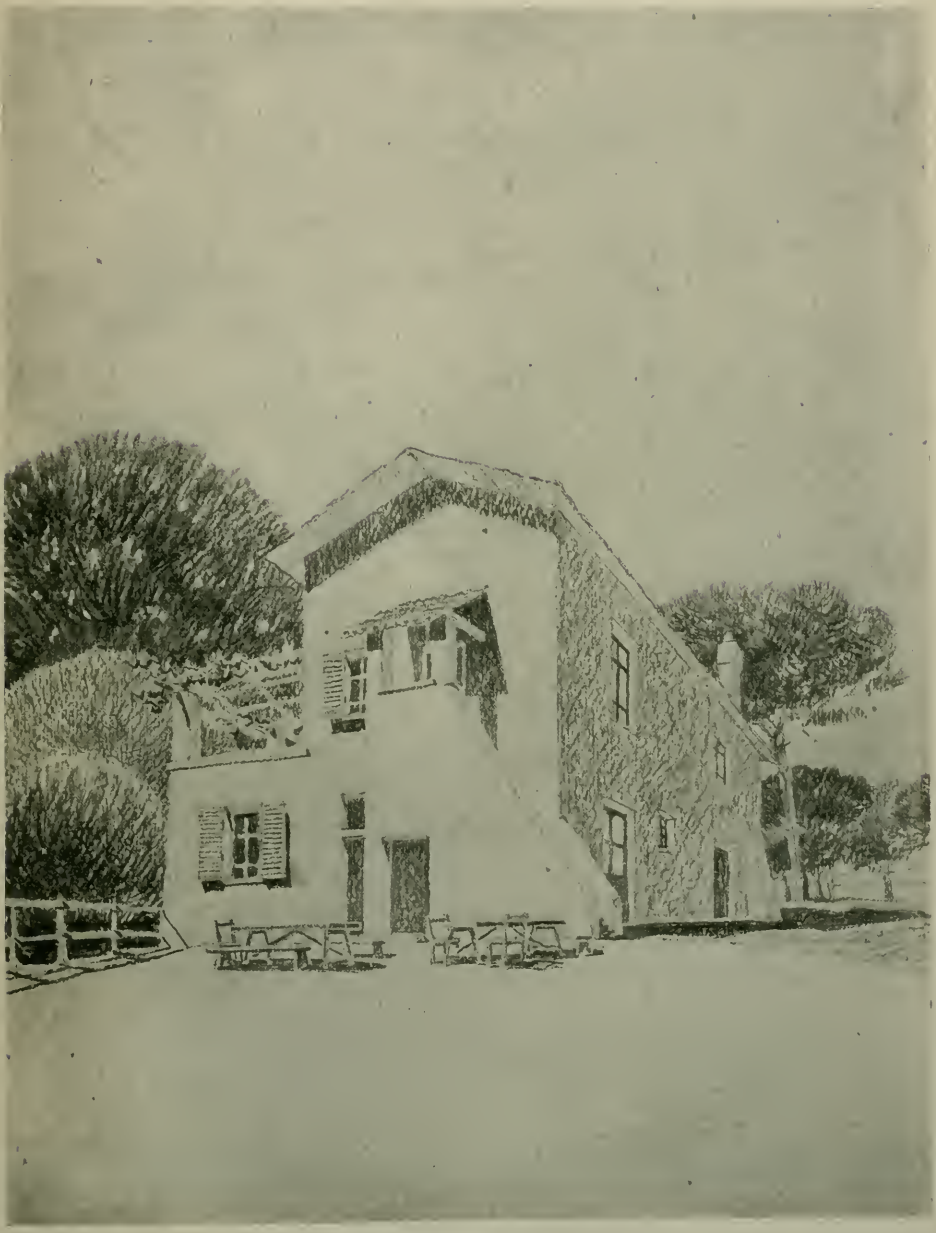
Renato Corte, *Architect*

FISHERMAN'S HOUSE IN NAPLES



GROUP OF HOUSES IN AMALFI

FARM HOUSE NEAR ROME



A TAVERN NEAR ROME

OLD CHURCH AT VILLA RUFOLO RAVELLO

FARM HOUSE NEAR ROME

GROUP OF HOUSES IN AMALFI

MODEL FOR THREE HOUSES IN SEACLIFF, SAN FRANCISCO
George E. McCrea, Architect

MODEL TYPES

By J.C.Mesick

GEORGE E. McCREA'S office in San Francisco, has just finished a test of patience and inventiveness—a quarter scale model of three homes for Allen & Co. to be built in Seacliff, costing approximately thirty-five thousand dollars each.

Mentally one is transported to a suburban district of quiet gardens where children seemingly could grow and bloom with the flowers and where everyone should be happy in a real home. The amounts of party wall are negligible and each house is arranged to coordinate with its neighbor in gaining the maximum of light, air and privacy for each without expense to another—an asset of group planning. The architect has made fine adjustments, impossible to neighbors, though ever so willing in spirit.

The model is an excellent one of its type. Each portion is in scale, even to the garden furniture shaped of wire and bits of board apparently by specialists' hands! An

REAR ELEVATION, THREE HOUSES IN SEACLIFF, SAN FRANCISCO

George E. McCrea, Architect

exclamation of pleasure cannot be repressed as Mr. McCrea tells you of how this and that were created even to the wrought iron of lead wire, etc., cleverly pierced and shaped. Indeed the model reflects knowledge of "things as they ought to be."

One might say "Everything is there," but would you realize that each flower and chimney pot is carved in wood, each roof tile is carved of linoleum, each ridge tile is modeled in an adhering gesso-like material (sold by stationers under various trade names). Would you know LePage's is stock for glue, being in and under about everything from paint to velveteen lawns. The structure was all planned and the main timbers and veneer base precut at the mill.

Sheet linoleum for walls, roofs, walks and accessories is perhaps the most novel application of any material used. Capable of yielding a subtle softness of line, it requires careful fastening by glue or brads at all edges and sometimes bracing to maintain plumb walls. Its lack of "grain" and "waxiness" aid in carving. Ready reception of glue aids in appliquing moldings and carvings. Paint adheres readily and corners are formed by beveling, gluing and temporary pin clamping.

Transparent celluloid (obtainable at stationers) lacquered at mutins and rails, form both open and closed windows. Views are obtainable from front doors through terrace French windows, to gardens. And so one might go on from detail to detail, each interesting and worthy of record. Though model makers may say they never build two models in the same way, it is out of such a fund of information that they wend a varied and discriminating way. We are glad that Mr. McCrea has contributed.

George Washington Smith

GEO. WASHINGTON SMITH ARCHITECT

A tribute by Lutah Riggs

THE architectural profession has suffered an irreparable loss by the sudden death of George Washington Smith, distinguished through the country for his regional architecture; and at the height of his career stricken down by heart failure at his home in Montecito on March 16.

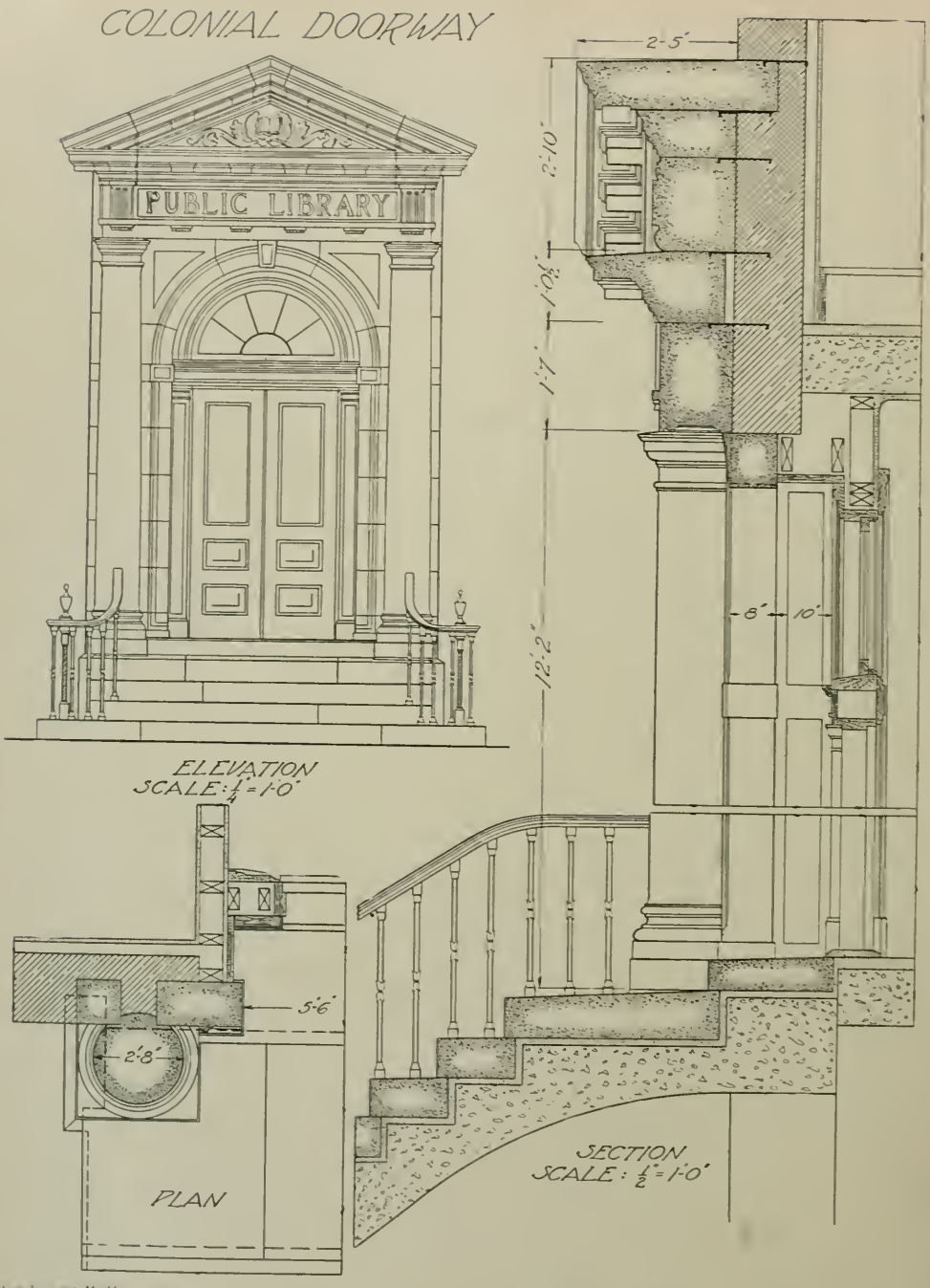
Born at East Liberty, Pennsylvania, February 22, 1876, he studied architecture at Harvard, and was later associated with various architectural firms in Philadelphia. Going abroad to study, he became intensely interested in modern painting in Paris, where he remained for three years with a studio in the Montparnasse quarter. On returning to New York, he became a member of that group of boon companions—Bellows, Glackens, Sloan, Speicher, and Henri—and exhibited in most of the prominent galleries of this country.

While on a painting tour in California, he decided to make his home in Santa Barbara, where he built himself a residence, and shortly afterward resumed the practice of architecture, working exclusively, for a time, in the manner of Southern Spain, inspired by the whitewashed walls and tile roofs of Andalusia. California is indebted to the vision and inspiration of George Washington Smith who introduced this type of house here, where it has proved its adaptability and suitability by its widespread popularity not only with the layman, but with the profession itself, some of the most distinguished members of which, fired by Mr. Smith's ideals, have created masterpieces which will be admired for all time.

Mr. Smith's taste was toward the more primitive in architecture, as in painting and sculpture. His work was always distinguished by its purity and simplicity, its lack of self consciousness, its fitness and exquisite charm. The exotic and romantic qualities were balanced by a certain restfulness and peacefulness.

He distinguished himself in residential architecture, although he did other work as well. He built extensively, not only in Santa Barbara and Montecito, where he had his office, but up and down the Coast of California, in Texas, Arizona, Colorado and New York. He took only those of the long distance commissions which he felt he could handle with distinction and satisfaction. He repeatedly turned down commissions in Florida, and also refused, though with reluctance, a commission to rebuild a mining town, which had been destroyed by fire in the high mountains of Ecuador.

He was of a retiring nature, modest and reserved, and not an adept at small talk. Dinner parties, conventions, and gatherings of any sort he regarded as ordeals. And with his tall and imposing frame, he presented a figure hard to approach. But with the ice finally broken, he was the most genial of companions, making the wittiest of dry remarks. He was always calm, kindly and thoughtful of the people around him; not overhasty in making decisions, and displayed infinite patience in dealing with everyone. He was a great artist, a distinguished architect, and a gentleman of the first water.



Courtesy Vermont Marble Company

DETAIL FOR MARBLE DOORWAY AND STEPS

ENGINEERING

and

CONSTRUCTION

WORLD'S HIGHEST CANTILEVER TYPE BRIDGE
(196 Feet Above Water)

Featuring

Steel Bridge, Spanning Columbia River,
From Longview, Washington, to Rainier, Oregon

WORLD'S HIGHEST CANTILEVER BRIDGE

By Frederic Earp.

THE gateway to Puget Sound and British Columbia from Northwest Oregon was formally opened to public traffic March 29, 1930, when the Columbia River Bridge between Rainier, Oregon, and Longview, Washington, was dedicated. For the first time in the history of white settlement on the Lower Columbia, which dates back to the days of Lewis and Clark, Dr. McLaughlin, and the Astoria Expeditions, it is possible for the motorist from the Northern coast of Oregon and the Lower river communities, to pass without long detour or slow ferry directly into the Evergreen State. The President of the United States from the White House in Washington, pressed a golden telegraph key that opened the bridge.

COLUMBIA RIVER LONGVIEW BRIDGE, OPENED FOR TRAFFIC MARCH 29, 1930
Strauss Engineering Company, Builders

The Columbia River-Longview Bridge has a cantilever span 1200 feet long and a clearance of 196.5 feet above mean low water of Columbia River. The maximum height above mean low water is 330 feet and the length, including wooden approaches, is 8289 feet. Beginning with the Longview or north side, the bridge has 2620 feet of wooden approach trestle; two 40-foot and one 168-foot steel approach spans;

a 760-foot anchor arm; a 1200-foot cantilever central span (which includes one 440-foot suspension span); a 760-foot anchor arm; two 337-foot, one 84-foot, one 168-foot and one 28-foot approach span; and 1800 feet of wooden approach trestle. It also requires 600 lineal feet of concrete paving on the Longview end and three-fourths mile of paving on the south end.
south end.

The roadway is 27 feet wide; there are two 3-foot sidewalks. The bridge is designed for two twenty-ton trucks passing abreast and for standard specifications of the American Association of State Highway Officials. The main trusses are designed for 60 pounds per square foot of roadway and for forty pounds per square foot of sidewalk. Secondary stresses were figured throughout. Carbon and silicon steel members were employed; the silicon being used where enough weight is saved to pay for its added cost.

The substructure was begun in October, 1928, and was completed the following June. There are four principal piers, five minor piers, and two sets of pedestals on the north bank.

Elevations for the bridge are referred to the U. S. Engineer's datum at Slaughter bar on Columbia River. Mean low water is at plus 2 feet with a main channel depth of 37 feet; the highwater elevation is plus 27 feet. The river-bed elevation ranges from minus 30 to minus 35 feet. Pier foundations are in a gravel and boulder stratum which slopes regularly from minus 25 feet under pier 7, near the Rainier side, to minus 84 feet under pier 1 on the Longview side. The distance from river bed to pier foundations varies from 20 to 38 feet.

COLUMBIA RIVER LONGVIEW BRIDGE, BUILT AT COST OF $5,800,000
Bethlehem Steel Company, Steel Fabricators

Pedestals A and B, C and D, are spaced 40 feet on centers, and carry a steel tower on which are joined the wooden approach trestle from Longview and 168-foot approach span.

Pier 1, which supports one end of the north anchor span, rests on a cluster of 216 timber piles with cut-off at elevation minus 48 feet. The pier was built with a timber

crib which extended from elevation minus 50 feet to the top of pedestals at elevation plus 30 feet. Pier 4, similar in design to pier 1, rests directly on the gravel and builder footing.

The main channel piers, 2 and 3, are of similar design. Pier 2 extends from elevation minus 75 feet to plus 30 feet and pier 3 from minus 60 feet to plus 30 feet. There are two base blocks for each pier; these are 84 feet long, 39 feet wide, and 16 feet deep. They are spaced 25 feet to give a base 84 feet square. Two concrete pedestals, 70 feet high, rest on each base block. The four pedestals are topped by shaft and bent structure 32 feet long. A heavy concrete slab resting upon the bent structure supports a steel tower 140 feet high. Pier 2 is 104 feet high; the distance from mean low water to bottom of chord at piers 2 and 3 being 185 feet.

The cribs were built in the Portland yards of the Pacific Bridge Co. They were then suspended by cables between two barges, floated downstream to the bridge site, lifted from the cables and lowered into position with a floating derrick. The cribs were sunk between guide piles through 10 feet of heavy boulders and basalt. A base course was poured as a seal. Forms were built within the cribs and the base blocks and pedestals were poured through tremies to elevation minus 2 feet or four feet below mean low water. The small head was then pumped out and the 32 feet poured in the dry.

The substructure contains 25,000 cubic yards of concrete, of which 20,000 cubic yards was a tremied 1:2:4 mix with one extra bag of cement per batch and 5000 cubic yards was a straight 1:2:4 mix, poured in the dry; 124,000 cubic yards of excavation; 350 tons of reinforcing and 63 tons of structural steel embedded in the concrete; one million board feet of timber cribbing; 10,000 cubic yards of riprap around piers; and 436 piling. There are 1100 cedar piling and four million board feet of local red fir in the timber approaches. The superstructure contains 12,500 tons of structural steel, of which about 6,000 tons were fabricated in the Bethlehem Steel Company plant at Steelton, Pa., and the remainder in the Seattle plant of the Wallace Bridge and Structural Steel Co.

Two 760-foot anchor arms were erected on falsework, with one-boom traveler operating on the floor level and a two-boom traveler operating on the top chord. The approach spans were erected on falsework with a traveler operating on the floor level. Two main towers were erected by the traveler on the bridge floor.

Two 380-foot cantilever arms were erected by the traveler operating on the top chords. The steel was hoisted from the river at the piers and sent out to the top derrick over the material track on the bridge floor.

A 440-foot suspended span was cantilevered out from both cantilever arms. The ssupended span was closed in the center by eight 500-ton hydraulic jacks, that let this span down to its final position. Slotted holes in the chords and diagonals at the center and in the chords at each end allowed this movement.

A light weight deck being desired, after a large number of tests of various materials, a volcanic cinder from the Bends was selected. This material showed very high test results. The reinforced slab is 6¾ inches thick. The mix was: 1:1:2.

The Bethlehem Steel Company was the general contractor with G. F. Beckerley, engineer in charge.

The bridge is privately owned by the Columbia River-Longview Bridge Company, W. D. Comer, Seattle, president; Wesley Vandercook, Longview, secretary; Joseph Strauss, engineer. Financing of the bridge was handled by J. and W. Seligman, New York, and Bradford, Kimball and Company, San Francisco.

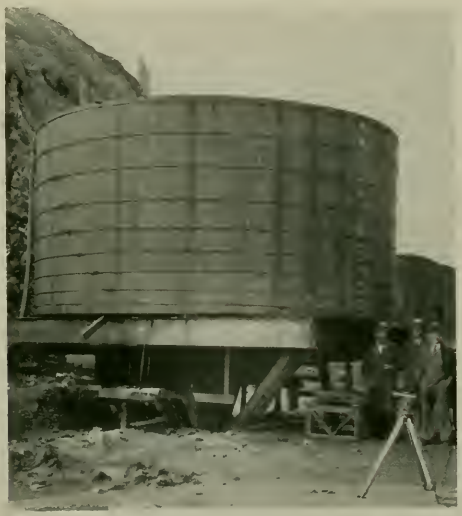
Opening of this new highway bridge forms an important connecting link in Pacific Highway, extending from Vancouver, British Columbia to Tia Juana, Lower California. Eventually this great arterial will be extended north from Vancouver into the Yukon and to the Arctic Circle, via Fairbanks to Circle City. South it will extend on to Mexico City.

Its immediate benefits will be the bring-

ing of the Ocean beaches of Western Oregon one hundred miles nearer Puget Sound and all of Western Washington. Completion of a stretch of twelve miles of roadway between Rainier and Vernonia, Oregon, will materially shorten the direct route between the Pacific Northwest and California points. The new bridge makes accessible to motorists the West Side Columbia River Highway between Rainier and Portland and gives Pacific Highway motorists between Puget Sound and Western Oregon points alternative routes into Portland. Heretofore the people of Rainier, Astoria and other communities in Northwestern Oregon, in order to reach Tacoma, Seattle and Vancouver, B. C., were obliged to use the slow ferry across the Columbia or resort to a one hundred and six mile detour.

Promoters of the enterprise fought for several years before obtaining permission from the Federal Government to construct the bridge. Finally congress passed the act authorizing construction and the bridge plans were approved by the departments of war, commerce and agriculture. In order to safeguard up-river commerce the center span of the bridge was raised to 196.5 feet above mean low water. The center cantilever span is suspended from high towers twelve hundred feet apart. From the inner towers that rest on concrete pedestal piers, to the shores, the spans are 760 feet long. Shore approaches built on timber supports make the total length of the bridge 8289 feet.

The toll houses and general bridge offices are on the Longview or Washington shore. Ohmer machines are used for recording traffic.



EQUIPMENT USED BY BARRETT AND HILP IN MAKING SOIL TESTS FOR PROPOSED GOLDEN GATE BRIDGE FROM SAN FRANCISCO TO MARIN COUNTY

SOIL TESTS FOR MARIN BRIDGE

The photograph shows equipment and construction engineers employed by Barrett & Hilp who are making soil tests at Fort Point on the San Francisco end of the contemplated Golden Gate Bridge. These tests are being made under the supervision of Captain Savage and Professor Ellis of the Strauss Engineering Company of Chicago, Illinois.

In order to ascertain the carrying capacity of the soil at this particular point an excavation was made approximately 8 ft. deep and in this excavation was placed a 20x20 Oregon pine post with a 20x20 steel plate on the bottom. This post in turn, supports steel beams carrying a water tank which will eventually hold 90 tons of water. Ten tons of water a day are being added and an accurate record kept of the settlement occurring.

The ARCHITECT'S VIEWPOINT

- *Architects and the City Plan.*
- *Public Resistance to a Comprehensive Plan.*
- *Responsibility for Small House Architecture.*

CONTRIBUTING EDITORS
WILLIAM C. HAYS . . *San Francisco*
CARLETON M. WINSLOW . *Los Angeles*
HAROLD W. DOTY . . . *Portland, Ore.*
CHARLES H. ALDEN . . *Seattle, Wash.*

A COLLABORATOR in these columns, in a recent issue of this magazine, under the caption, "A Plea for Better Town Planning," treats of a subject which is vital to the proper progress of municipalities and to some extent to smaller communities, but in spite of the attention given it mainly by architects and through the architectural press, is conspicuous in its failure to make an adequate appeal to the public. The town planning situation in Ventura, with its opportunities so eloquently portrayed by Mr. Winslow, is but an example of the conditions and opportunities existing in myriads of other communities in our newer and undeveloped sections of the country. Why do such communities refuse to adopt comprehensive plans when such wise foresight would not only enhance their future attractiveness but result in so directing public expenditure that the usual waste would be eliminated and progress made to the best economic advantage?

In the constant efforts to make the public see this planning view point may not the failure to secure public recognition be partly due to the nature of the appeal? The architect, foremost among those who attempt to make the appeal, is trained to plan. He is one who should rightfully and effectively take a leading part in promoting the application of planning to the larger aspects of community life. Is not his failure due to some defects in his method of making his plea to the so-called "layman"?

Experience has proved that one defect of the architect in the past has been the exploitation of visionary schemes in such a manner as to shake the confidence of the public, from the standpoint of practicability, somewhat uncertain. Town planning, like the planning of buildings, must be based on fundamental practical requirements. Happily this condition of unsound exploitation has now materially changed and city planning has ceased very generally to be exploited by the visionary irresponsible artist but is recognized more as a practical science.

Another defect in the methods of the architectural enthusiast, we believe, lies in his eagerness to "educate" the public. We all need to learn from those whose trend of thought and experience has been directed along avenues affecting the public welfare which differ from our own, but the architect does not alone have the mission to educate in civic endeavor. Would he not make greater progress if he avoided the implication that he, apart from the general public, is particularly in a position to exert an educating influence?

* * *

PRESIDENT HAMMOND of the American Institute of Architects, on his recent visit to the Pacific Coast, in calling the attention of the Seattle members of the Institute to the vital need of a comprehensive plan for their city, said that in their efforts to secure the plan they "should work constructively to overcome the resistance of the public." Does not this suggest a better method of approach, when the practical means of overcoming resistance is in making education mutual, bringing about a sympathetic con-

sideration of varying view points and constructively removing the resistance to a plan by a co-operative effort, avoiding the implication that the architect is alone the educator.

Disregarding the resistance of private interests considering only their own material welfare, the general form of resistance from the public arises from a natural opposition to any restrictive regulation. The comprehensive city plan, whether mandatory or not, imposes some restriction as it in some manner directs attention to definite procedure in the physical development of the city. The burden of proof is on the advocates of the plan to show its value and create confidence in the way the plan has been worked out for the public benefit.

Plans are necessary in the accomplishment of any worthwhile endeavor, particularly so in the permanent building for a community, and any defective methods in their accomplishment are worthy of earnest attention. As stated by a writer of antiquity some fifty years before the Christian era, "We must make plans, who looks not before, finds himself behind."

* * *

ANOTHER phase of planning which has been given some attention in these columns and more generally exploited elsewhere in the architectural press, is the small house plan. *Pencil Points*, now particularly active in disseminating opinions on this subject, quotes THE ARCHITECT AND ENGINEER, concluding with the apparent expectation of future discussion.

In quoting what is termed a "comeback" from another collaborator in these columns the present writer is credited with statements he had made in those columns which conclude and to some extent summarize his views. These are that under present conditions "the professional architect and his organization must recognize some responsibility towards providing effective means for the small home owner to get some measure of architectural service. If it cannot be furnished by individual architects on the professional basis they desire to maintain, how better can it be done than by properly supervised and professionally controlled ready made plan services?"

This statement has not been denied or the question answered in any of the voluminous opinions expressed on the small house stock plan controversy. Do the authors of these various opinions recognize or deny that the architect has a responsibility "towards providing effective means for the small home owner to get some measure of architectural service?" If they do recognize some such responsibility do they offer any constructive suggestion toward meeting this responsibility in place of the stock plan service they so violently oppose? Their voluminous opinions are singularly devoid of any such suggestions and the writer's question "how better can it be done than by properly supervised and professionally controlled ready made plan services" remains unanswered.

It is not answered by predictions that such small house plan services will expand to include all types of buildings resulting in the elimination of the architect. If the architect continues to meet the problem of the larger building why should this service expand? If he fails to meet the problem of service on such buildings as has been done with the small house he must expect to be eliminated to a similar extent.

The questions cannot be answered by denying architectural service to sparely populated areas of the country because some architect might desire to attempt the planning of a small house in a city and be obstructed in this endeavor by a ready made plan service. The writer's experience is that the architect's attempts at the usual small house under present conditions generally results in inadequate remuneration or poor service. Is this to be encouraged by the architect and his professional organization?

On the formation of a western division of the Architects' Small House Service Bureau a telegraphic order for plans was received from an isolated community in North Dakota. The order was filled and the house built to the satisfaction of the owner. Some time later, an order was received from a neighboring isolated community which

was likewise filled and the house built to the satisfaction of the owner. Granting that these houses must have lacked somewhat the character of houses individually designed and supervised by an architect as an individual service, obviously impossible in this and many other extended areas in this country, would the opponents of the stock plan of service deprive these millions of our citizens of opportunity for any architectural expression in their homes?

No suggestion has apparently been made to otherwise meet this condition. If this condition is not met and the small house stock plan service abolished, what then becomes of the declared intent of the American Institute of Architects which it now consistently follows and which should be the intent of every architect worthy of the name, "to make the profession of ever increasing service to society."

CHARLES H. ALDEN, F. A. I. A. Seattle, Wash.

EDITORIAL CHAT

GREAT preparations are being made for the second annual Decorative Arts Exhibition to be held in the Women's City Club, San Francisco, commencing April 18th and continuing until May 5th. According to those in charge the show is going to eclipse anything of its kind yet undertaken west of Chicago, in fact it seems likely to arouse national interest as already evidenced by inquiries from Eastern decorators and designers. Because of the growing interest in modern decorative work, THE ARCHITECT AND ENGINEER will devote a considerable part of its May number to the San Francisco show. Special articles by Pacific Coast authorities on the modern movement will accompany photographic reproductions of the various booths, paintings and murals, and William I. Garren, architect in charge of the display, has designed a striking modernistic cover for the number. To add interest to the issue arrangements have been made with Arthur Brown, Jr., one of the Chicago 1933 World's Fair architects, for the release of some of the advance drawings of Exposition buildings, all of which are ultra modern in design and treatment.

COLONEL W. A. STARRET, builder and owner of skyscrapers, recently spoke before an assembly of architects, engineers and contractors, at the San Francisco Commercial Club. A moving picture machine which showed how an eighty story building was erected, floor by floor, furnished the theme for Col. Starrett's talk and his audience seemed immensely pleased with the movie reproductions and the colonel's explanatory remarks.

Referring to the advisability of erecting tall buildings Colonel Starrett said he considered that to be a question for each community to solve in its own way. He pointed out, speaking as a building owner, that fifteen or twenty different buildings all of the same general character in a single block was a mistake from an economic standpoint. Interests of the owners would be best served by a single building in which better disposition could be made of floor space, operating costs could be reduced to a minimum, and substantial and prosperous tenants could be retained by having room to supply their needs as they expand.

Col. Starrett declined to commit himself regarding the twelve story height limit of office buildings in Los Angeles.

THE ARCHITECT AND ENGINEER feels complimented that it should have been privileged to make the first showing of Messrs. Miller and Pflueger's two splendid buildings, the San Francisco Stock Exchange and Four Fifty Sutter Street. Both structures reflect the modern spirit in sane but daring treatment and they have placed these architects well up with the leaders in modern design. Wide interest was taken in the Stock Exchange, as evidenced by many requests from all parts of the country for copies of the issue illustrating the building. This month we show Four Fifty Sutter Street, the best thing Miller and Pflueger have done since the Telephone Building.

BALM FOR THOSE WHO SEEK UNPAID FEES

Editor, The Architect and Engineer,
San Francisco, California.

That case of Marsh & Kendig, architects, against a church for payment of fees was interesting and seems to establish the owner in a stronger position to hornswogle the poor innocent architect. Here's a little balm for the latter, another case. It never occurred to me to write about it before but it's interesting and may help some of your readers:

In the early '90's my firm, Traphagen & Fitzpatrick was ordered by a group of Boston bankers to proceed with plans for a large 12 story building on Duluth's principal street. Things were at a boom then and such an order was not an uncommon occurence. Plans were quickly produced, foundations started and everything lovely. Do you remember the big panic? Well, it began to loom just about then. I wrote the Boston folk that things were tightening up and advised them to finish only the ground floor, not go on with the rest until better times. I was sure it couldn't be rented, we'd probably get only nominal rents for the first story stores, but that would help carry the interest etc. on what had been spent. It was a most valuable lot. They thanked me for the information and acted upon it. We got some tenants for the stores and all was well.

We were paid for our services on what had been built. But the pinch was coming, our collections were falling off and we needed money.

Mark you the plans were made for the entire building.

I was in Boston about that time, explained the situation to those people, for whom I had saved so much money and worry, and suggested they pay us something on the plans for the whole. I got down to $3,500 on account. No, not a penny. They had paid for what they had built. If they ever went on with the rest it would be time enough to talk about fees. I had made out a bill for the $3,500 on account of plans, but was so dinged hard up I offered to take $1,500.

They substantially told me to go to the devil!

So back to Duluth I went and instructed our lawyer, a clever Irishman, to sue those toppy Bostonians for the measley $3,500 we had asked for on account. He thought it over and said he wouldn't sue for that or any definite amount, but would sue for the entire fee, as if the building had been completed, and leave it to a jury to say how much that fee should be and what part of it we had already earned.

We being in Minnesota and the defendants in Massachusetts the case went to the Federal court. A sapient judge and jury sat on the case, took evidence as to what the complete building would have cost, the cost to us of supervision that had not been done, making of more details and all that sort of thing and awarded us a verdict of $13,000 for what we had done over and above what we got for the completed basement and first floor. The other side canvassed the situation and came to the conclusion that an appeal would do them little good, so reluctantly coughed up the $13,000 that looked mighty good to us just then! And that was that.

Advise your readers who contemplate litigation excursions to be sure they always employ a clever Irish lawyer.

F. W. Fitzpatrick.

P. S. Bully number that last one of yours. Full of meat and interesting matter, graphic and literal. That Olympic Club by B. B. B. is the best thing we've seen anywhere in a long while.

HALE BROS. BUILDING

Plans are being completed by Binder and Curtis of San Jose and Swan and Lane of Chicago for a four story reinforced concrete department store building in San Jose for Hale Bros., Inc. The structure, planned for future extensions, will represent an immediate expenditure of $500,000.

SAN FRANCISCO'S SKYLINE

[Concluded from Page 64]

great earthquake and fire. Now such cathedrals of commerce, as the Pacific Telephone and Telegraph Building, the Hunter-Dulin, Standard Oil, Russ and Shell Oil buildings look down upon the tower of this oldest skyscraper. There are others of lesser heighth, but with a nicety of form, rising fifteen to seventeen stories, which aid in the formation of a remarkably fine metropolitan skyline.

Perhaps, however, one should make this test at least and take a transbay ferry and, in the early morning, gaze back at the receding city, where water, hills and buildings are combined into a picture that has composition, feeling and life. He who makes this little excursion will have no regrets and will carry with him memories of a picture nowhere else excelled in America with the possible exception of New York.

LATE INVENTIONS IN THE CONSTRUCTION FIELD

EDITOR'S NOTE: Realizing that the patent problem is not only a vital one to many of our readers, but that it also has a wide public interest for its informative value, arrangements have been made with Ray Belmont Whitman, patent attorney, of New York City, to edit a Department dealing with the latest patented inventions bearing upon the architectural, engineering and building construction fields. Mr. Whitman will write articles on the subject of Patents and its allied fields of Trade Marks and Designs in a manner which will no doubt be instructive and readable to lay-men, and, finally, to give any reader personal advice without obligation on all such problems.

Mr. Whitman was for many years the Chief Patent Counsel and Consulting Engineer for one of America's largest corporations. He is the author of the largest selling book on "Patents."

ABOUT PATENTS

By RAY BELMONT WHITMAN

THE subject of patents is one about which we are all concerned, for practically every manufacturing company in this country has been founded directly or indirectly as the result of the monopoly obtained through patents for inventions.

Over 1,700,000 such patents have been issued in the past 100 years or more, and at the present time some 40,000 patents issue each year and an equal number of applications are filed which never issue into patents. In addition, probably another 100,000 inventions are conceived which, for one reason or another, never reach the application stage.

In these articles I will attempt to give some interesting and yet valuable information to the general reader on the subject of patents and inventions, and also on trade marks and designs.

The Fathers of our Country were indeed wise men to encourage invention by putting into the Constituton, in 1790, that provision which now gives to the patentee of a new invention an exclusive monopoly to prevent others from making, using and selling it, for the first seventeen years after the issue of the patent, in return for its mere disclosure to the public and free use thereafter.

Our patent laws are the most liberal in the world. Nowhere else can a poor man with a good idea so easily acquire both fame and fortune as the result of protecting and marketing it.

There is now scarcely a town, village, or hamlet throughout our broad land but what has at least one prominent citizen living on Easy Street in a mansion purchased from the profits of a patented invention. In fact, some of our greatest fortunes have been made through the outright sale or royalty of these rights.

It has been well said that practically all of us are original enough to have conceived, sometime in our lives, at least one really valuable invention. The trouble usually is that we don't realize this and therefore take no steps to patent and market it.

In the beginning it is important to correct an almost universal misconception which alone is responsible for many serious losses to the uninformed.

A patent does not, as many believe, give to its owner the right to make, use and sell the invention. It merely gives the right to exclude others from making, using and selling the invention as specifically covered in the claims of the patent.

The inventor who has conceived an invention, providing no one else has

SOME RECENT INVENTIONS

Blast Furnace, Number 17,551, Re-issued January 7th, 1930, inventor, Wallace Stuart, Cleveland, Ohio, Inventor, assigned to Inland-Stuart Linings, Inc., Delaware.

Window and Door Frame, Number 17,552, Re-issued January 7, 1930 to the inventor Fred C. Anderson, Bayport, Minn.

Weather Stripping, No. 1,742,195, Issued January 7, 1930 to the inventor Maurice E. Bosley, Chicago, Ill., assigned to The D. W. Bosley Company, Chicago, Ill.

Fire-Escape Railway Structure, No. 1,742,202, Issued January 7, 1930 to the inventor, Edward Ehlers, Montclair, N. J.

Building Structure, No. 1,742,209, Issued January 7, 1930 to the inventor, Charles F. Kuhnla, Jamaica, N. Y., assigned to August Kubnla, Inc., New York.

Beam Hanger, No. 1,742,210, Issued January 7, 1930 to the inventor, John Lally, Great Neck, N. Y.

Column, No. 1,742,223, Issued January 7, 1930 to the inventor, Horace H. Sears, New York, N. Y.

Storm Window, No. 1,742,405, Issued January 7, 1930 to the inventor, Ovide L. Martin, Bradley, Ill.

Sliding Door, No. 1,742,408, Issued January 7, 1930 to the inventor, John P. McWilliams, Cleveland, Ohio.

Window Frame, No. 1,742,435, Issued January 7, 1930 to the inventor, William H. Cox, Ness City, Kansas.

Excavator and Metbod of Operating Same, No. 1,743,123, Issued January 7, 1930 to the inventor, Frank E'wood, Weiner, Ark.

Fire Box for Cast-Iron Boilers, Issued January 7, 1930 to the inventor, Harry E. Gilbert, Bridgeport, Conn.

Apparatus for Making Sand Cores, No. 1,743,473, Issued January 7, 1930, to French H. Moorehead, Boston, Mass.

Device for Filling and Sealing Cracks, No. 1,743,474, Issued January 7, 1930, to the inventor, William H. Norfolk, Brentwood Heights, Cal.

Building Wall, Material and Methods of Making Same, No. 1,743,527, Issued January 14, 1930 to the inventor, Dominick J. Calderazzo, Brooklyn, N. Y.

Window-Glass Fastener, No. 1,743,077, Issued January 14, 1930 to the inventor, Jacob Mauthe, Waterbury, Conn.

Shutter, No. 1,743,696, Issued January 14, 1930 to Henry M. Vetterlein, Philadelphia, Pa.; one-half interest assigned to Henry Penn Burke, Philadelphia, Pa.

Sheet Metal Window, No. 1,743,783, Issued January 14, 1930 to the inventor, George W. Lancaster, Richmond, Va.

Expanded Metal Latb, No. 1,743,800, Issued January 14, 1930 to the inventor, James W. Pearce, Philadelphia; assigned to North Western Expanded Metal Co., Chicago, Ill.

Nosing for Stair Treads, No. 1,743,982, Issued January 14, 1930 to the inventor, John W. Scott, New York.

Escalator, No. 1,743,995, Issued January 14, 1930 to the inventor, Gad R. Bartlett, Boston, Mass.

Steel Bleacher, No. 1,744,127, Issued January 21, 1930 to the inventors, Henry D. Oberdorfer, Champaign and Ralph R. Bramhall, Decatur, Ill.

Building Block and Method of Laying Same, No. 1,744,171, Issued January 21, 1930 to the inventor, Edward M. Lane, Charleston, S. C.

Air-Cooled Furnace Block, No. 1,744,185, Issued January 21, 1930 to the inventors, Frank H. Waite and George W. Davey, Long Island City, N. Y.

Tile and Fixture Mounting, No. 1,744,187, Issued January 21, 1930 to the inventor, William G. Webster, Chicago, Ill., assigned to Porcelain Tile Co., Chicago, Ill.

Window Construction, No. 1,744,394, Issued January 21, 1930 to the nventor, Claude A. Lewis, Houston, Texas.

Shingle and Method of Cutting the Same, No. 1,744,490, Issued January 21, 1930 to the inventor, Charles W. Mortimer, Upper Montclair, N. J.

Interior Building Construction, No. 1,744,582, Issued January 21, 1930 to the inventor, Clarence H. Collings, Cleveland Heights, Ohio.

previously been granted a patent on it, has already the right to make it, use it, or sell it, as he chooses. This is his common law right. And everyone else, as well, has the same right! Our government, by enacting our patent laws, has sought to encourage invention by granting to every inventor who applies, an exclusive right for the first seventeen years to prevent others from making, using or selling the invention claimed. If, however, this right has been previously granted to another on any part of the invention, then the later inventor is just as much stopped from using the previous invention as is the rest of the public.

Most inventors, and indeed many otherwise intelligent manufacturers and purchasers of patents, fail to grasp this situation. As a result, they proceed on the basis that the patent, having been granted by the government, gives them the right to use the invention. But as most patents are in the nature of improvements over older devices, it is frequently necessary for the inventor to employ also one or more of such older devices in order to make use of his own invention. And as it sometimes happens that some such former device or method is already covered by a patent to a prior inventor, the later inventor then finds himself in the unfortunate position of not being able to use himself what he can prevent others from using!

This very important point should always be kept in mind when dealing with patents. Later, under the heading "Infringement Searches", it will be explained how to determine whether or not a patent owner has the right to use the invention without risk of infringing any such prior patents of others.

* * *

Next month I shall discuss who may obtain a patent, when it may be obtained, and on what, commenting briefly on patent failures and patent successes, and pointing out why some men get rich and others stay poor in the field of invention.

Under the heading "Questions and Answers", the writer will be glad to impart such information as the reader wishes to know, making his inquiry in letter form addressed to the Patent Editor, in care of this magazine; write on one side of the paper only, sign full name and address; only initials will be published if requested.

Roofing, No. 1,744,589, Issued January 21, 1930 to the inventor Harry N. Striewig, Chicago, Ill., assigned to The Lehon Company, Chicago, Ill.

Roof Covering, No. 1,744,656, Issued January 21, 1930, to the inventor Charles J. McDavitt, Chicago, Ill., assigned to The Lehon Company, Chicago, Ill.

Combined Buck and Jamb, No. 1,744,730, Issued January 28, 1930, to the inventor Isaac A. Baum, Chicago, Ill.

Frame and Plaster Anchor, No. 1,744,732, Issued January 28, 1930, to the inventor Isaac A. Baum, Chicago, Ill.

Window, No. 1,744,980, Issued January 28, 1930, to the inventor Michael R. McCarty, St. Louis, Mo., one half interest assigned to Thomas W. Walsh, St. Louis, Mo.

Casement Window, No. 1,745,016, Issued January 28, 1930, to the inventor Karl F. Joss, Washington, D. C., assigned to Crittall Casement Window Co., Detroit, Mich.

Checker Brick, No. 1,745,113, Issued January 28, 1930, to the inventor William W. Odell, Minneapolis, Minn.

Sound-Deadening Device, No. 1,745,171, Issued January 28, 1930, to the inventor Jacques Jean Kocher, Chicago, Ill.

Nail-holder for Shingles, No. 1,745,315, Issued January 28, 1930, to the inventor William J. Parker, Waterbury, Conn.

Cellular Stucco Mix and Method of Making the Same, No. 1,745,635, Issued February 4, 1930, to the inventor, Gustave Adolph, New Port Clinton, Ohio.

Structural Element and Structure Composed Tbereof, No. 1,745,729, Issued February 4, 1930, to the inventor Armen H. Tashjian, Cleveland, Ohio.

Reenforcement for Monolithic Elements, No. 1,745,880, Issued February 4, 1930, to the inventor, Joseph Winston, New York, N. Y.

Building Construction, No. 1,746,440, Issued February 11, 1930, to the inventor George F. Pawling, Philadelphia,, Pa., assigned to Pawling System, Inc., Philadelphia, Pa.

Supporting Concrete Beam, No. 1,746,559, Issued February 11, 1930, to the inventor Rolf Sahlberg, New York, N. Y., assigned to The Aerocrete Corporation, New York, N. Y.

Method of Making Compound Wall Structures, No. 1,746,596, Issued February 11, 1930, to the inventor Luther Loucine Knox, Bellevue, Pa., assigned to Knox Products Company, Pittsburgh, Pa.

Reenforcing Fabric, No. 1,746,625, Issued February 11, 1930, to the inventor Arthur J. White, Pittsburgh, Pa.

Building Construction, No. 1,746,816, Issued February 11, 1930, to the inventor George F. Boes, Indianapolis, Ind.

Foundation, No. 1,746,918, Issued February 11, 1930, to the inventor Fred Elburn Webster, San Antonio, Texas.

*Copies of any of the above patents may be obtained by sending fifteen (15c) cents for each copy desired to the "Patent Editor" in care of this magazine.

FAVORS FORTY-HOUR WEEK

A news dispatch from Washington, D. C., reads: "Several Government departments have lately shown a disposition to co-operate with San Francisco contractors and the Carpenters' Union over their recent agreement to adopt the forty-hour week as a means of relieving unemployment. The matter came up when Representative Welch was informed that Dyer Brothers, San Francisco contractors, might have to pay a heavy penalty on a warehouse they are building for lighthouse service on Goat Island if they lived up to the new agreement. The Carpenters' Union itself asked Welch to intervene in behalf of the contractors, who had agreed to erect the building within 140 days. Dyer Brothers' carpenters are now working forty-four hours a week. Welch laid the proposition before the Department of Commerce, which expressed its willingness to co-operate if the Comptroller General would give his consent. Welch then saw Comptroller General McCarl and was advised that the matter would be given sympathetic consideration. He later was informed over the telephone that probably some satisfactory understanding could be worked out."

ARCHITECTS SEEK COMMISSIONS

No less than seven architects competed informally for the commission to prepare plans for a new Junior High School at Vallejo, California. A bond issue for approximately $230,000 is contemplated.

Architects who applied for the commission included W. H. Weeks, San Francisco; A. O. Johnson, Berkeley; J. J. Donovan and Howard Schroeder of Oakland; Coffman, Sahlberg & Stafford, Sacramento; Chas. E. Perry, Vallejo, and Davis-Pearce Co., Stockton.

APPLY MOLDINGS TO PANELING

THERE are several methods of joining panels to the stiles and rails and applying moldings to paneling. The architect, in making his details, will wish to consider the cost and effectiveness of the various methods.

Figure 1 shows a simple method which is often used when paneling is to be built by the carpenter on the

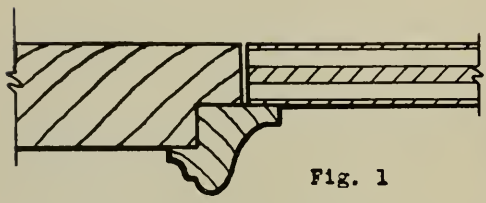


Fig. 1

job. It should never be used for a cabinet job of paneling, however, because it prevents the assembling of the paneling for finishing. The joint is such that the panels drop out unless they are assembled against a wall.

The panels are held against the stiles and rails by metal pins or nails in Figure 2. This is all right while the paneling is being built, except perhaps for final installation, but it makes repairs very difficult. A marred panel cannot be removed without wrecking an adjoining stile, and then the new or repaired pan-

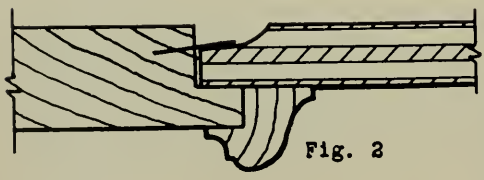


Fig. 2

el cannot be readily put in place. Such a joint should never be used for paneling in which the back side is not readily accessible.

The preferred construction shown in Figure 3 holds the panel firmly in place but permits its easy removal. The lip against which the panel rests should not be less than a quarter of an inch thick. The back of heavy panels may be rabbeted out as much as necessary to set the face back to the desired position. Panels are free to shrink or swell slightly as they need not be fitted tightly into the openings. This con-

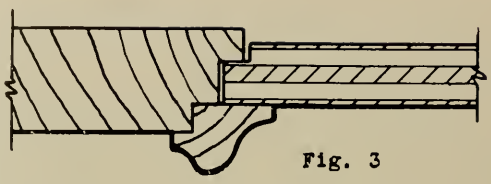


Fig. 3

struction also is a little less expensive than that in Figure 2.

It is suggested that details show the bottom rail of paneling raised at least an inch above the floor, with the stiles running on down to the floor. Then the paneling can be fitted to the floor where necessary, merely by sawing off the stiles a little, rather than by ripping the full length of the bottom rails. A base molding of some sort always covers the joint between the floor and the paneling anyway, so it is not necessary that the bottom rails rest directly on the floor.

RADIO TALK ON BUILDING

An interesting description of the vast building program of the Federal Government, now under way, was given in a radio address by Ferry K. Heath, Assistant Secretary of the Treasury, recently broadcast over the Columbia net work. This program as now being carried out was the result of a nation-wide survey by the Secretary of the Treasury and the Postmaster-General of the needs of the country to meet the problems created by suspension of public building activities during the war and resulting huge rents for inadequate temporary quarters which it was necessary to provide in many cities throughout the country.

"The total amount required to meet the public building needs of the country as determined by our survey was $588,000,000 divided $190,000,000 for the District of Columbia and $398,000,000 for the country at large," said Assistant Secretary Heath. "To date, Congress has authorized an expenditure of $338,000,000, $75,000,000 of which is for the purchase of land and the construction of executive buildings in the District of Columbia. There is now pending in Congress legislation which will increase the amount already authorized from $388,000,000 to $568,000,000. The division of this enormous sum is $190,000,000 for the District of Columbia and $378,000,000 for the country at large.

"Present legislation requires that the $338,000,000 now authorized shall be expended over a period of ten years, or at the rate of $35,000,000 a year.

WITH *the* ARCHITECTS

MARTINEZ HIGH SCHOOL

Plans have been completed in the office of W. H. Weeks, Hunter-Dulin Building, San Francisco, for a new junior high school group, including classrooms, auditorium and gymnasium, for the Alhambra Union High School District, Martinez. There is practically $250,000 available for the improvement. Bids for the general construction are to be opened by the Trustees April 24th.

The same architect has completed plans for additions to the Herbert Hoover Grammar School at Burlingame, estimated to cost $65,000. Bids are to be opened April 14th.

OAKLAND APARTMENTS

Chester H. Treichel, American Bank Building, Oakland, has completed plans for a $65,000 three-story frame apartment building with reinforced concrete basement garage, to be built on 38th Street, near Manila Avenue, Oakland, for N. E. Rockwell, 640 East 15th Street, Oakland. There will be fifty-four rooms.

WOODSIDE RESIDENCE

Plans are being prepared in the office of Reginald D. Johnson, architect of Los Angeles, for a $200,000 home in Woodside, San Mateo County, for Rudolph Schilling of San Francisco. Mr. Johnson is also preparing plans for a brick residence in Hillsborough, San Mateo County, for Walter D. Main.

LOS ANGELES THEATER

Morgan, Walls and Clements, Van Nuys Building, Los Angeles, are preparing plans for a $1,000,000 theater at Wilshire Boulevard and Western Avenue, Los Angeles, for Warner Brothers. G. A. Lansburgh of San Francisco is associated with them.

BERKELEY ARCHITECT BUSY

New work in the office of Edwin L. Snyder, 2101 Addison Street, Berkeley, includes $20,000 residences for F. B. Travers in Claremont Pines, William G. Donald in North Berkeley and a Spanish house on Regal Road, North Cragmont.

HEALDSBURG THEATER

Plans have been completed by Norman R. Coulter of San Francisco for a $100,000 theater at Healdsburg for the Redwood Theaters, Inc.

COLUMBUS MEMORIAL COMPETITION

There were 112 American architects who entered the first stage of the Columbus Memorial competition. By action of the jury, ten designs were selected as qualifying for entrance into the second stage. Of the ten contestants selected, three are from the United States, three from France, one from England, one from Spain, one from Italy and one from Germany.

The new program for the final stage of the competition involves many new requirements, and its preparation is now under way. The program will be set forth in a book of 250 pages, which will include reproductions of one hundred of the designs submitted in the first stage, together with an account of the ceremonies attending the exhibition held in Madrid and Rome.

The government of Spain, in recognition of the services of Albert Kelsey, the technical advisor, has decorated him with the Royal Order of Isabella the Catholic.

HOUSE AND GARAGE COMPETITION

A competition for the design of an eight room house and two-car garage is sponsored by *Pencil Points* Press.

The competition is open to any architect or draftsman in the United States. Contestants may submit any number of designs. The competition closes at 6 p. m., May 15th. There will be four prizes, totaling $1600.

STORE BUILDINGS

The office of Bertz, Winter and Maury, 210 Post Street, San Francisco, has been busy designing several store buildings, one of which is now being erected on Chestnut Street, San Francisco, a second is about to be started in San Mateo and a third at Tracy. The Urban Properties Company are the owners.

THIRTEEN-STORY BUILDING

Plans are being prepared in the office of Aleck Curlett, Union Bank Building, Los Angeles, for a thirteen-story Class A apartment building at Wilshire Boulevard and Highland Avenue, Los Angeles, for John I. Phillips. The estimated cost is $1,200,000.

EUREKA APARTMENT BUILDING

Newton Ackerman of Eureka, has prepared plans for a $175,000 apartment-hotel at Eureka for the Zanone Estate.

ARCHITECTS TO COMPETE

Ten architects of international reputation will compete in the final stage of the architectural competition for the selection of a design for a Monumental Lighthouse to honor the memory of Christopher Columbus, to be erected in Santo Domingo, according to an announcement of the Permanent Committee of the Pan American Union on the Columbus Memorial Lighthouse. These architects will participate in the second stage of the competition as a result of having their designs placed first in the preliminary competition, which was judged by the International Jury which met at Madrid, Spain, last year. The names of the architects who will compete in the second competition are as follows:

Will Rice Amon, of the United States.

Josef Wentzler, of Germany.

Helmle, Corbett and Harrison, of the United States.

Pippo Medori, Vincenzo Palleri and Aldo Vercelloni, of Italy.

Louis Berthin, Georges Doyon and Georges Nesteroff, of France.

Donald Nelson and Edgar Lynch, of the United States.

Joaquin Vaquero Palacios and Luis Moya Blanco, of Spain.

Theo. Lescher, Paul Andrien, Georges Defontaine and Maurice Gauthier, of France.

J. L. Gleave, of England.

Douglas D. Ellington, of the United States.

A. R. WIDDOWSON

Arthur Reginald Widdowson, architect of Sacramento, died at his home in that city March 1, following a prolonged illness. He was fifty-one years of age. Mr. Widdowson, who had been connected with a San Francisco firm before coming to Sacramento, was widely known in Sacramento because of his specialized work in the field of domestic architecture.

His work in the State Department of Engineering prior to opening an office for himself, was notable for its excellent qualities. He was a member of the Sacramento Architects Society.

DAVID SALFIELD

David Salfield, architect, builder and developer of El Dorado Heights in Stockton, died in that city March 7. Mr. Salfield operated the Alpine Mill and Manufacturing Company of Stockton. He was a native of Keyesport, Ill. As early as 1880 he was employed in the offices of San Francisco architects.

FIRM DISSOLVES PARTNERSHIP

The architectural firm of Irvine and Ebbetts has dissolved partnership and the practice of architecture will be continued under their respective names. Mr. Irvine is completing plans for a five-story Class A hotel building, to be located at Market and 12th Streets, San Francisco, at a cost of $160,000.

DESIGNING TIRE STATIONS

The office of Charles W. McCall, 1404 Franklin Street, Oakland, is quite busy designing stations to be built in various California cities for the Firestone Tire and Rubber Company. Buildings are already under construction in Oakland and Stockton and plans are being figured for one in Palo Alto.

CLUB BUILDING

Willis Polk and Company, architects of San Francisco, have let contracts for the Union League Country Club at Millbrae, California, amounting to $44,000, exclusive of heating and painting, and the Henry Holt residence at Pebble Beach, for $27,000.

SANTA CRUZ RESIDENCE

Plans have been completed by William Wilson Wurster, 260 California Street, San Francisco, for a $15,000 residence to be built on the private golf course managed by Robert Howes, near Santa Cruz.

HOTEL ADDITION

Plans are being prepared in the office of Gordon B. Kaufmann, Union Bank Building, Los Angeles, for a $2,500,000 addition to the Hollywood Ritz-Carlton Hotel. There will be three hundred guest rooms.

TO DESIGN GOVERNMENT BUILDING

Arthur Brown, Jr., of San Francisco, will design the new San Francisco Federal Office Building, to be erected at Fulton, McAllister and Leavenworth Streets, at a cost of $2,800,000.

SOUTHERN PACIFIC HOSPITAL

The office of Coffey and Rist, architects, has completed plans for the Southern Pacific Hospital at Phoenix, Arizona, and the new wing of the San Francisco Hospital for the same company.

GARAGE AND OFFICES

A. H. Knoll, architect, is completing plans for the erection of a garage and offices on Hampshire Street, San Francisco, at a cost of $60,000, for the Sunset Scavenger Corporation.

SALVATION ARMY BUILDING

The Salvation Army property department at San Francisco, through Colonel Andrew W. Crawford, chief secretary for the western territory, has announced plans for the construction of a new industrial home and hotel for Portland, Oregon, and the renovation and improvement of the present institution, to cost approximately $500,000. Work will be started immediately under the direction of Berkheimer and Sarmal, general contractors of Portland, who have been awarded the contract. The new building, which will be three stories, 50 by 80, of brick construction, is to be erected on lots long owned by the Army adjoining the present Industrial Home and Hotel at Union and East Ash Streets.

JOSEF JACOBBERGER

Josef Jacobberger, a member of the firm of Jacobberger & Smith, architects of Portland, Ore., died in that city March 18, of heart trouble.

Mr. Jacobberger was 62 years of age. Born in Alsace-Lorraine, he came to this country when he was two years old, living in Omaha, Nebraska, during his earlier school days. After he reached his twentieth birthday, the architect left his home to start work in various cities located in the Middle West. He was in New York during part of this time and also in Minneapolis. He was a member of the Portland Chapter, A. I. A.

TO DESIGN ALTURAS SCHOOL

Starks and Flanders of Sacramento are preparing plans for a new grammar school. Selection of this firm was made after the trustees at Alturas had inspected preliminary drawings by George W. King and Ralph D. Taylor of Alturas and Frederick H. Reimers of Oakland.

LOS ANGELES CHURCH

Plans have been completed in the office of Messrs. Allison and Allison, Los Angeles, for a Class A church on 6th Street, near Commonwealth Avenue, Los Angeles, to cost $750,000. The owners are the First Congregational Church Society.

SAN JOSE BROKER'S OFFICE

Plans are in course of preparation in the offices of Kent and Haas, Underwood Building, San Francisco, for a stock brokerage office for Messrs. Gorman and Kayser at San Jose.

AMEND PORTLAND LICENSE LAW

An amendment to the ordinance regulating contractors, so that there will be no requirement except that of a license, has been presented to the City Council of Portland, Oregon. The amendment eliminates the bond of $2500 formerly required, which caused a storm of protest from the industry and makes it possible for those bonds to be canceled. Also it does away with the classification of contractors, which brought about a virtual war among the contractors and the subsequent resignation of the Board of Examiners. A new board, consisting of four building contractors and one other man prominent in the construction industry, is provided for also. Two of the new board will be builders of residences, two men handling bigger projects and the fifth will be selected from a list to be made up by the other four, and all will be named by the mayor.

PERSONALS

George W. Kelham, representing the American Institute of Architects, Northern California Chapter, Geo. D. Burr of the City Bureau of Engineering and Carl J. Rhodin of the Engineers' Club, have been named members of the San Francisco Traffic Survey Committee to offer a specific plan for the solution of the parking problem in San Francisco.

William Mooser Company announces the removal of their offices from the Nevada Bank Building to the Monadnock Building. By an error it was stated last month the firm had moved to the Foxcroft Building, San Francisco.

John S. Siebert Company, 1100 Watts Building, San Diego, succeeds to Loring and Virgil W. Cash, the latter being junior member of the new firm.

Bernard Maybeck, architect of San Francisco, has been conferred the degree of Doctor of Law by the University of California.

SANTA BARBARA BUILDING

Plans have been completed by Edwards and Plunkett of Santa Barbara for a two-story masonry office building to cost $70,000 for the Santa Barbara Mutual Building and Loan Association.

SMALL HOMES

Donnell Jaekle, designer of small homes, has recently completed designs for a group of houses at Millbrae Highlands, costing from $9,000 to $10,000 each.

SOCIETY and CLUB MEETINGS

SOUTHERN CALIFORNIA CHAPTER

At the March 18th meeting of Southern California Chapter announcement was made of the honor awards for architecture of exceptional merit in buildings erected during the last three years in Los Angeles and vicinity. Following the presentation ceremonies, lantern pictures of each building receiving an award were shown. Photographs of these buildings and a general display of architectural work were on exhibition at the Los Angeles Central Library, Fifth Street and Grand Avenue, March 18 to April 5, inclusive. At the present time the exhibit is being shown in the Architects' Building.

H. C. Chambers, president of the local chapter, presided at the meeting and introduced the following guests: Dr. Ernest C. Moore, president of the University of California at Los Angeles; Dr. Frank A. Bonelli, superintendent of the Los Angeles public schools; Dr. Charles K. Edmonds, president of Pomona College; Julian Garnsey, mural painter; John Bakewell and Arthur Brown, San Francisco architects; Miss Florence Yoch, landscape architect, and Arthur S. Bent. Mr. Bent was the speaker of the evening and stated that programs such as the honor awards for architectural work were a great help to the cultural progress of a community and referred to this meeting as another milestone in the pathway of our progress. Miss Yoch talked on the interdependence of landscaping and architecture and complimented the chapter members on the co-operation accorded those of her profession.

SAN FRANCISCO ARCHITECTURAL CLUB

The month of March started off with a bang, as far as club activities were concerned. There were 142 present at the theater party held at the Alcazar on Tuesday, March 4th.

At the business meeting the following day there was a very fine attendance, especially considering the weather. Vice-President Ira Springer presided in the absence of Ted Ruegg, who is in Reno (on business) for a month or two.

'Dickey Holloitie' Rae, chairman of the entertainment committee, announced that arrangements were being completed for the annual picnic, where the game between the Atelier and Engineers for possession of the silver cup would take place. The Atelier has won the cup twice to date.

Robert Norton, chairman of the exhibition committee, told of the luncheons which are held every Thursday noon at the Wall Street Coffee Shop and urged all the members to attend.

After the meeting, Stanton Willard of 'Gladding-McBean Co.' gave a talk on the history of tile making and the many photographs, colored drawings and examples of decorative tile work, were viewed with great interest. The traveling exhibition of the Beaux Arts Institute of Design also caused a deal of comment.

The Club is trying a new method of taking care of the employment situation and the architects are asked to co-operate. There is someone on duty in the club rooms each day between 12:30 and 1:30 p. m. to receive applications for positions and help fill them. Call the Club if in need of a job or if you are in need of help.

NORTHERN CALIFORNIA CHAPTER

The regular meeting of the Northern California Chapter, American Institute of Architects, was held at the City Hotel, Tuesday, March 25th, at 1:30 p. m. President Frederick H. Meyer presided.

The following were in attendance:

FELLOWS—Ernest Coxhead.

INSTITUTE—Harris C. Allen, G. F. Ashley, John Bakewell, Jr., Arthur Brown, Jr., Morris M. Bruce, Birge M. Clark, John J. Donovan, William I. Garren, Henry H. Gutterson, George R. Klinkhardt, Charles F. Maury, Frederick H. Meyer, Chester H. Miller, L. B. Miller, James H. Mitchell, James T. Norbert, Eric J. Osborne, Frederick H. Reimers, Roland I. Stringham, William W. Wurster, Ralph Wycoff, Stanton D. Willard.

ASSOCIATE—Thomas J. Kent, Harris Osborn, Charles F. B. Rueth, Ernest Weihe, Louis Schalk.

CHAPTER—P. J. Herold, Mark T. Jorgensen, Ernest L. Norberg.

The following were selected delegates to attend the convention of the Institute to be held in Washington, D. C. on May 21, 22, 23: Birge M. Clark, Ernest Coxhead, Warren Perry, Harris Allen, Albert J. Evers, William I. Garren, and John Galen Howard.

The remainder of the Institute members of the Chapter were elected to serve as alternates.

The following motion was presented by Mr. Donovan and unanimously carried.

"RESOLVED, that the Board of Directors of the Chapter be requested to consider the advisability of recommending to the 1930 A. I. A. Convention Committee on Program the assignment of time for discussion and study of—(1) The relation of private architects to Federal work, with the idea of developing a practical method, free of politics, for the employment of private firms on medium-sized projects as well as on the larger ones: (2) The possibility of de-centralizing the activities of the Bureau of the Supervising Architect of the Treasury Department and other federal agencies, in order to have as much work as possible carried on in district offices: (3) Means of putting into effect advance planning of Federal projects, retardation of Federal construction and conservation of Federal construction funds in times of general construction activity and prompt action in letting contracts for advance-planned buildings in times of depression in private construction work.

It was moved and unanimously carried, that a congratulatory letter be sent to Honorary Associate Bernard R. Maybeck, conveying the pleasure of the Chapter for the distinction of having the honorary degree of L. L. D. conferred upon him by the University of California.

John Bakewell advised of the action of the special committee in the matter of the proposal of the Board of Health to add an additional story to each of the ward units of the San Francisco City and County Hospital. Whereas, the committee composed of Messrs. Bakewell, Hobart and Mitchell had reported that the proposed structure would detract from the appearance of the buildings as a group, and whereas, the Board of Health notwithstanding is proceeding with this program, it was moved and carried that the Board of Health be asked to reconsider the matter and enter into further consultation with the committee or Directors.

Through the unavoidable absence of John Reid, who was chairman of the program, G. F. Ashley presided for the remainder of the evening, and different phases of the subject were very capably handled in the following series of talks:

1. Management of Construction—a Science, A. M. Cruxson of P. J. Walker & Co.
2. Fire Protection and Relation between the Architect and the Underwriters' Laboratories, H. G. Ufer, Western Superintendent, Underwriters' Laboratories.
3. Corrosion, William E. Leland, of Leland and Haley, Mechanical Engineers.
4. New Era in Painting, Walter D. Jones, Chemist.

Mr. Leland was not able to be present, and Mr. Meyer quite impromptu, covered his topic with a relation of encountered experiences and advances being made to overcome such ravages upon pipe systems.—J. H. M.

LOS ANGELES ARCHITECTURAL CLUB

The Los Angeles Architectural Club gave its first Annual Dishonor Awards at the Elite Cafe, Tuesday night, March 25th.

Prominent architects sat in amazement in the audience and watched their cherished idols shattered by the cold-hearted, analytical judges who discussed their work as it was thrown on the screen.

The chairman of the evening, Carleton M. Winslow, introduced the three distinguished judges, Sumner Spaulding, Julian Garnsey and J. E. Stanton.

Talks on Art and Culture were given by Myron Hunt, impersonated by A. E. Hedrick and Orra Monnette, characterized by J. L. Brady. Mr. Hunt, sitting among the guests, seemed to enjoy the interpretation of himself in the highest degree.

A Spanish dance by Senorita Morales, or lack of Morales, as Mr. Winslow introduced her, was given by Edward Mussa. J. Donald Prouty, as a most distinguished lady of known religious activity, was the climax of the evening.

Beneath the raillery and friendly banter a serious object lesson was given. Photographs proved conclusively that some of our best architecture was ruined by lax zoning supervision and heedless, selfish disregard of civic beauty, by adjacent property owners. St. Paul's Cathedral, Reginald Johnson, architect; the B'Nai B'Rith Synogogue, A. M. Edelman and David Allison, architects; the Ambassador Hotel, Myron Hunt, architect, and the Wilshire Boulevard Christian Church, Robert Orr, architect, were outstanding examples of this type of "vandalism."

PROMOTION FOR MR. LOEW

Julius Kahn, president of the Truscon Steel Company, announces the appointment of Oscar W. Loew as a vice president of the Truscon Steel Company. Mr. Loew has been director of advertising and sales promotion of Truscon for the past six years. Prior to his joining the Truscon Steel Company, Mr. Loew had achieved many outstanding successes in advertising and sales work, both in this country and Canada, and his counsel has been sought by many industrial leaders. Mr. Loew's appointment as vice president is recognition by the Truscon Steel Company of the high value of his services to that organization.

SOUTHERN CALIFORNIA CHAPTER, A. I. A., HONOR AWARDS

HONOR awards have been made by the Southern California Chapter, A. I. A., as a result of the jury's report submitted recently to the members. The jury was composed of C. Herrick Hammond and James Monroe Hewlett, president and vice-president, respectively, of the American Institute of Architects and Clarence A. Tantau of San Francisco. The jury's report follows:

"In submitting our report as the jury for the honor awards of the Chapter, we desire to express our appreciation of the high standard of excellence that has been attained in the architectural productions of this district during the past three years and our conviction of the impossibility of doing full justice to the many admirable examples that have been brought to our attention within a period of a few days, to which our deliberations and comparisons have necessarily been limited.

"In general, we are impressed by an extraordinary unanimity of purpose shown in the great mass of buildings submitted to work within the limits of a character of expression and enrichment that has been well tried and found to be in harmony with the history, climate and habits of this locality. Although the time has been lacking to differentiate with exactness between the detailed merits of individual works, we hope and believe that the list of buildings that we have selected for awards may be of educational value in encouraging a civic consciousness of the fact that no work of architecture stands or fails by its own merit alone, but rather by its relation to what has preceded it and what is to follow it."

The committee on honor awards consisted of Palmer Sabin, chairman; S. M. Spaulding, R. E. Coate, Eugene Weston and Winston Riseley. Chairman Sabin presented the report of the committee as follows:

"Over 200 nominations were submitted for honor awards. Of these the greater number were from Los Angeles, Pasadena and vicinity. The northern section, including Santa Barbara, had 11 entries; the southern section, including San Diego, had 10 entries, and the eastern section, including Riverside, had 17 entries. The exhibit comprised approximately 2000 photographs and plans and represented work from every class of building except memorials and city, community and regional plans.

"The allied arts exhibits submitted were limited to a few articles in each instance because of lack of display space. These exhibits were comprised largely of furniture and iron work. Your committee feels that another year this section should be given more consideration and that the architects making submissions should encourage the artisans who have done exceptional work for them to submit exhibits.

"Certain comments by the members of the jury are pertinent and are given herewith for the help they may offer to future juries. In commercial work, the jury stressed the importance of the control of signs on buildings and in two particular instances they eliminated these buildings for the above reason. They also commented on the fact that in certain instances there was a lack of unity in buildings within a block, which worked to the detriment of all. Such cases where a new building destroys the harmony, if such exists, the composition as a whole has been spoiled. A courtesy should be expected from the owner or architect of a new building of recognizing the precedent established and to key their work accordingly. Specific instance of coordination is evidenced in the Title Insurance Building and an apparent lack of same with regard to the Security Bank, Wilshire branch.

"The jury was disposed to discourage the award of steep-roofed houses and were unanimously in the opinion that California has a distinct tradition and type to adhere to. Mr. Hewlett comments, 'There is not another community in this country that has accepted tradition and has done the appropriate thing in respect to domestic work as evidenced here.' "

Following is a list of awards:

Group I, Single Dwellings

Section A, Single Dwellings, Less Than 7 Rooms

Residence of Mr. and Mrs. Herbert F. Young, 1946 Rose Villa, Pasadena; Donald D. McMurray, Pasadena, architect; C. C. Boening, Pasadena, contractor.

Residence of Mr. and Mrs. Harold Ogden, 1125 Armada Dr., Pasadena; Marston & Maybury, Pasadena, architects; C. R. Greenough, San Gabriel, contractor.

Residence of Leland F. Fuller, 1043 Centinella Ave., Brentwood Heights; Leland Fuller, Los Angeles, architect; Fred K. Anderson, Los Angeles, contractor.

Section B, Single Dwellings, 7 to 15 Rooms

Residence of Mr. and Mrs. J. E. Buchanan, Palos Verdes; Kirtland Cutter, Long Beach, architect; A. C. Leonard, contractor.

Residence of Mr. and Mrs. Wm. E. Hart, 1230 S. Orange Grove Ave., Pasadena; Roland E. Coate, Los Angeles, architect; Frederick H. Ruppel, Pasadena, contractor.

Residence of Mr. and Mrs. Curtis Cate, Carpinteria; Reginald D. Johnson, Los Angeles, architect; Snook & Kenyon, Santa Barbara, contractors.

Residence of Mr. and Mrs. Wallace Neff, 1883 Orlando Road, Pasadena; Wallace Neff, Pasadena, architect; Lars Swanson, Pasadena, contractor.

Residence of Mr. and Mrs. Roscoe Thomas, 815 S. Orange Grove Ave., Pasadena; Palmer Sabin, Pasadena, architect; F. H. Ruppel, Pasadena, contractor.

Residence of Mr. and Mrs. Herbert G. Clifford, 58 N. San Rafael, Pasadena; Donald D. McMurray, Los Angeles, architect; C. C. Boening, Pasadena, contractor.

Residence of Mr. and Mrs. Cutting, 2170 W. Twentieth St., Los Angeles; Garvin Hodson, Pasadena, architect; E. J. Cutting, contractor.

Section C, Single Dwellings, 15 *Rooms or More*

Residence of Mr. and Mrs. M. E. Getz, 1007 N. Beverly Dr., Beverly Hills; Gordon B. Kaufmann, Los Angeles, architect; John Mayer, Los Angeles, contractor.

Residence of Mr. and Mrs. F. M. P. Taylor, 121 Undine Way, Beverly Hills; Roland E. Coate, Los Angeles, architect; J. S. Abel, Los Angeles, contractor.

Residence of Mr. and Mrs. K. B. Johnson, 2845 Sycamore Canyon, Montecito; George Washington Smith (deceased) Montecito, architect; Snook & Kenyon, Santa Barbara, contractors.

Section D, Secondary Buildings

Building for Mr. and Mrs. Donald R. Dickey, Ojai; Palmer Sabin, Pasadena, architect; Frederick H. Ruppel, Pasadena, contractor.

GROUP II, MULTIPLE DWELLINGS

Section A, Apartments Less Than 7 *Families*

No awards.

Section B, Apartments, 7 *or More Families*

No awards.

Section C, Clubhouses Having Bedrooms

No awards.

Section D, Hotels

Hotel at Flintridge, Flintridge Corporation, owner; Myron Hunt and H. C. Chambers, Los Angeles, architects; Senator Frank P. Flint, builder.

La Quinta Hotel, Indio; Gordon B. Kaufmann, Los Angeles, architect; Desert Development Co., builder.

La Venta Inn, Palos Verdes Estates; Pierpont and Walter S. Davis, Los Angeles, architects; Palos Verdes Project, builder.

GROUP III, COMMERCIAL BUILDINGS

Section A, Mercantile Buildings Less Than 5 *Stories*

Building at 3257 Wilshire Blvd., Los Angeles; J. C. Everding, owner; John Parkinson and Donald B. Parkinson, Los Angeles, architects; Edwards, Wildey & Dixon Co., Los Angeles, contractors.

Building at 469-483 E. Colorado St., Pasadena; T. W. Warner, owner; Marston & Maybury, Pasadena, architects; John H. Simpson, Pasadena, contractor.

Section B, Mercantile Buildings, 5 *to* 12 *Stories*

No awards.

Section C, Mercantile Buildings, 13 *or More Stories*

Title Insurance & Trust Building, 433 S. Spring St., Los Angeles; John Parkinson and Donald B. Parkinson, Los Angeles, architects; Scofield Engineering Construction Co., tractors.

Section D, Banks

Wilshire-La Brea Branch, Security-First National Bank of Los Angeles, 5220 Wilshire Blvd.; Morgan, Walls & Clements, Los Angeles, architects; Harvey A. Nichols, Los Angeles, contractor.

Section E, Theaters and Auditoriums

Mayan Theater, 1040 S. Hill St., Los Angeles; H. W. Stowell, owner; Morgan, Walls & Clements, Los Angeles, architects; Scofield Engineering Construction Co., contractors.

Section F, Industrial Buildings

No awards.

Section G, Airports, Etc.

No awards.

Section H, Studio Buildings

Studio building at 627 S. Carondelet St., Los Angeles; J. H. Thomas, owner; Webber, Staunton & Spaulding, Los Angeles, architects; J. S. Metzger & Son, Los Angeles, contractors.

Studio building, 170 E. Colorado St., Pasadena; Palmer Sabin, Pasadena, architect; Frederick H. Ruppel, Pasadena, contractor.

GROUP IV, QUASI-PUBLIC BUILDINGS

Section A, Churches

First Church of Christ, Scientist, Fillmore; H. Roy Kelley, Los Angeles, architect; Frank C. Schilling, Los Angeles, contractor.

Section B, Academies, Collegiate Buildings, Private Schools and Other Educational Buildings

No awards

Section C, Hospitals and Institutional Buildings

No awards.

Section D, Recreational, Social and Cultural Buildings

Casino at Avalon; Webber & Spaulding, Los Angeles, architects; Santa Catalina Island Co., owners and builders.

Section E, Buildings Not Included in Sections A, B, C and D

No awards.

GROUP V, PUBLIC SCHOOLS

Section A, High Schools

No awards.

Section B, Junior High Schools

No awards.

Section C, Intermediate and Elementary Schools

Hawthorne school, Beverly Hills; Beverly Hills School District, owner; Ralph C. Flewelling, Beverly Hills, architect; J. S. Metzger & Son, Los Angeles, contractors.

GROUP VI, FEDERAL, STATE AND MUNICIPAL BUILDINGS

Section A, Administration and Other Government Buildings

City Hall, Pasadena; Bakewell & Brown, San Francisco, architects; Orndorff Construction Co., Los Angeles, contractors.

Section B, Libraries, Art Galleries and Museums

City library, Pasadena; Myron Hunt and H. C. Chambers, Los Angeles, architects; Wm. C. Crowell, Pasadena, contractor.

Section C, Bridges, Viaducts

No submissions.

Section D, Exposition Buildings

No awards.

Section E, Other Public Buildings

No awards.

GROUP VII, MEMORIALS

No submissions.

GROUP VIII, GROUP DESIGN

No awards.

GROUP IX, CITY, COMMUNITY AND REGIONAL PLANS

No submissions.

GROUP X, LANDSCAPE ARCHITECTURE

Section A, Landscaping City Lot

No submissions.

Section B, Landscaping Private Estate of One Acre or Less

Grounds of residence for Mrs. R. Fudger, 211 S. Muirfield Road, Los Angeles; Yoch & Council, landscape architects.

Section C, Landscaping Estates of More Than One Acre

Estate of Mr. and Mrs. Getz, Beverly Hills; Paul B. Thiene, landscape architect.

Section D, Public Parks

No submissions.

GROUP XI, ARTS ALLIED WITH ARCHITECTURE

Section A, Mural or Decorative Painting

Murals, University of California at Los Angeles, Westwood; Julian Garnsey, artist.

Ceiling, First National Bank, Pasadena; John B. Smeraldi, artist.

Ceiling, Getz residence, Beverly Hills; John B. Smeraldi, artist.

Section B, Sculpture

No submissions.

Section C, Stained Glass

No awards.

Section D, Ceramics

Tile work, University of California at Los Angeles and Warner buildings; Gladding, McBean & Co.

Ceramics, Hollywood Legion Building; Eugene Weston, Hollywood, architect.

Section F, Other Arts

Lighting fixtures, Getz residence, Beverly Hills; B. B. Bell & Co.

Ornamental iron work, Lloyd residence, Beverly Hills; Frank Weingartner.

Ornamental iron work, City Ornamental Iron Works.

Furniture and Panelling, Lloyd and Getz residences, Beverly Hills; George S. Hunt.

Architectural photographs, Wm. M. Clarke.

SANTA BARBARA AWARDS

Prize awards for the best examples of architecture executed in 1928 and 1929 in Santa Barbara have been announced by the Community Arts Association of that city. Parchment certificates, attesting the awards, were given to the owners and architects of the buildings. The jury consisted of H. C. Chambers, president of Southern California Chapter, American Institute of Architects; Charles H. Cheney, architect and city planner; H. Philip Staats, architect, and John M. Gamble, secretary of the Santa Barbara Art League. Following are the awards:

Buildings Erected in 1928

First—E. F. Hutton Co. office building, 936 State St.; owner, Salisbury Field; architects, Soule, Murphy & Hastings.

Second—Telephone building, 101 W. Canon Perdido St.; owner, Santa Barbara Telephone Co.; architects, Masten & Hurd.

Second—Peabody school, Rutherford tract; owner, City of Santa Barbara; architects, Soule, Murphy & Hastings.

Third—Office, 115 West De la Guerra St.; owner, W. D. V. Smith; architects, Edwards & Plunkett.

Special—Bath house; owner, Santa Barbara Biltmore Hotel; architect, Reginald D. Johnson.

HONORABLE MENTION

Service station, 634 Chapala St.; owner, William P. Moller; architects, Soule, Murphy & Hastings.

El Cortijo, coast highway; owners, Mr. and Mrs. Edward Hibbert; designers, Mr. and Mrs. Hibbert.

Remodeling office and stores, 19 East Canon Perdido St.; owner, A. R. Demory Investment Co.; architects, Edwards, Plunkett & Howell.

Buildings Erected in 1929

First—Anacapa unit, El Paseo; owner, De la Guerra Properties, Inc.; architect, Carleton Monroe Winslow.

Second—Junipero Serra Hall; owners, Franciscan Fathers of California; architect, Ross Montgomery.

Third—Office, 583 San Ysidro Rd.; owners, Montecito water district; designer, Mrs. James Osborne Craig.

Special—County courthouse, for court elevation of central unit and interior; owner, county of Santa Barbara; architects, William Mooser Co.

HONORABLE MENTION

Auditorium, state college; owner, state of California; state architects.

Fire station, East Sola St.; owner, city of Santa Barbara; architects, Edwards & Plunkett.

Service station at entrance to San Roque Park; owner, Dr. Harry L. Schurmeier; architects, Edwards & Plunkett.

Spring house, Picacho Lane; owner, George F. Steedman; architects, Edwards & Plunkett.

Special for Additions — Two wings of museum, Mission Canyon; owner, Santa Barbara Museum of Natural History; architect, Carleton M. Winslow.

Honorable mention—Remodeled office, 1026 State St.; owner, Mortgage Securities, Inc.; architects, Soule, Murphy & Hastings.

Honorable mention—Iron shop, 20 East Canon Perdido; owner, De la Guerra Properties, Inc.; architect, Carleton M. Winslow.

Special—Group of new cottages; owner, Santa Barbara Biltmore; architect, Reginald D. Johnson.

The jury, in its report, said:

"The simplicity of the Californian style of architecture as developed in Santa Barbara is very effective and every effort should be made to maintain the interest and dignity of your commercial and civic architecture. The reputation of Santa Barbara as a place of unusual charm depends not only upon the great number and variety of its beautiful homes and gardens, but upon its business and public structures.

"We cannot, however, overlook the fact that aside

[Please turn to Page 115]

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ACOUSTIC CORRECTIONS
Johns-Manville Company, all principal Coast cities.
R. Guastavino Co., represented by Albert B. Mann, Engineer, 417 Crocker Bldg., San Francisco.
"Acousti-Celotex," Western Asbestos Magnesia Co., 25 South Park, San Francisco.

AIR COMPRESSORS
Dayton, sold by Simonds Machinery Co., 816 Folsom Street, San Francisco; 520 East 4th Street, Los Angeles.

ART METAL
Federal Ornamental Iron and Bronze Co., 16th St. and San Bruno Ave., San Francisco.
Michel & Pfeffer Iron Works, 1415 Harrison Street, San Francisco.

ARCHITECTURAL ENCAUSTIC TILE
Mangrum-Holbrook Co., Inc., 1235 Mission Street, San Francisco.

ARCHITECTURAL BRONZE
Elevator Supplies Company, Inc., Hoboken, N. J.; 186 Fifth Street, San Francisco; 1120 S. Hope Street, Los Angeles.

ARCHITECTURAL TERRA COTTA
N. Clark & Sons, 116 Natoma Street, San Francisco.
Gladding, McBean & Co., 660 Market St., San Francisco; 621 S. Hope St., Los Angeles; 1500 First Ave. South, Seattle; 454 Everett St., Portland; 15th and Dock Sts., Tacoma, and 22nd and Market Sts., Oakland.
W. S. Dickey Clay Mfg. Co., San Francisco and Oakland.

ASBESTOS MATERIALS
Johns-Manville, Inc., of California, 159 Montgomery St., San Francisco. Coast Factory at Pittsburg, Calif.
Western Asbestos Magnesia Company, 25 South Park, San Francisco.

ASPHALT ROOFING
El Rey Products Company, 1633 San Pedro St., Los Angeles; 960 Seventh St., San Francisco; 65 Columbia St., Seattle; 850 E. Taylor St., Portland.
The Paraffine Companies, Inc., San Francisco, Oakland, Los Angeles, Portland and Seattle.

BATHROOM ACCESSORIES
The Mosaic Tile Co., Zanesville, Ohio; West Coast Offices: E. K. Porter, 568-7th St., San Francisco; O. M. Bendure, 2470 Enterprise St., Los Angeles.

BEDS—WALL—CONCEALED, ETC.
Marshall & Stearns Co., Phelan Bldg., San Francisco.

BLACKBOARDS
C. F. Weber & Co., 654 Second St., San Francisco, Los Angeles and Reno, Nevada.

BOILERS
Kewanee Boiler Co., 637 Minna St., San Francisco.
Kewanee Water Supply System. Simonds Machinery Co., 816 Folsom St., San Francisco.
Consolidated Steel Corporation, 1200 N. Main St., Los Angeles.

BONDS FOR CONTRACTORS
Bonding Company of America, Kohl Bldg., San Francisco.
Globe Indemnity Co., 444 California St., San Francisco.
Fidelity & Casualty Co. of New York, Balfour Bldg., San Francisco.
Standard Accident Insurance Company, California Commercial Union Building, San Francisco.

BRICK—FACE, COMMON, ENAMEL, GLAZED
Gladding, McBean & Co., 660 Market St., San Francisco; 621 S. Hope St., Los Angeles; 1500 First Ave. South, Seattle; 454 Everett St., Portland; 15th and Dock Sts., Tacoma, and 22nd and Market Sts., Oakland.
N. Clark & Sons, 116 Natoma Street, San Francisco.
W. S. Dickey Clay Mfg. Co., San Francisco and Oakland.
Port Costa Brick Works, 6th and Berry Sts., San Francisco.
McNear Brick Company, Monadnock Bldg., San Francisco.
The United Materials Company, 625 Market St., San Francisco.
Richmond Pressed Brick Co., 625 Market Street, San Francisco. Plant at Richmond, Calif.

BRICK AND CEMENT COATING
The Paraffine Companies, Inc., 475 Brannan St., San Francisco.

BUILT-IN FURNITURE
Built-in Fixture Company, 2608 San Pablo Ave., near Dwight Way, Berkeley, and Hoosier Store, Pacific Bldg., San Francisco.

BUILDERS' HARDWARE
"Corbin" hardware, sold by Palace Hardware Company, 581 Market St., San Francisco.

BUILDING MATERIALS
The Sisalkraft Company, 205 W. Wacker Drive, Chicago, Ill.; 55 New Montgomery St., San Francisco and Hammond Lumber Co., Los Angeles.
The United Materials Company, 625 Market St., San Francisco.

BUILDING PAPERS
El Rey Products Company, 1633 N. San Pablo Street, Los Angeles; 960 Seventh Street, San Francisco; 65 Columbia Street, Seattle; 850 E. Taylor St., Portland, Ore.
The Paraffine Companies, Inc., San Francisco, Los Angeles, Portland and Seattle.

CARPETS AND RUGS—IMPORTED
Kent-Costikyan, Inc., 485 Fifth Ave., New York City, with offices at 442 Post St., San Francisco and 816 South Figueroa St., Los Angeles.

CASING, METAL
Milwaukee Corrugating Co., Milwaukee, Wis., Soule Steel Co., Rialto Bldg., San Francisco, distributors.

CEMENT
Pacific Portland Cement Co., Hunter-Dulin Bldg., San Francisco, also Portland, Ore., Los Angeles and San Jose, Calif.
Santa Cruz Portland Cement Company, Crocker Building, San Francisco.

CEMENT EXTERIOR WATERPROOF PAINT
Bass-Heuter Paint Company, San Francisco, Los Angeles, Portland, Seattle.
The Paraffine Companies, Inc., San Francisco, Los Angeles, Portland and Seattle.

CEMENT TESTS—CHEMICAL ENGINEERS
Robert W. Hunt Co., 251 Kearny St., San Francisco.

CLAY PRODUCTS
N. Clark Sons, 116 Natoma St., San Francisco.
W. S. Dickey Clay Mfg. Co., San Francisco and Oakland.
Gladding, McBean & Co., 660 Market St., San Francisco; 621 S. Hope St., Los Angeles; 1500 First Ave. South, Seattle, 454 Everett St., Portland; 15th and Dock Sts., Tacoma, and 22nd and Market Sts., Oakland.
The United Materials Company, 625 Market St., San Francisco.

COMPRESSORS FOR COLD STORAGE IN HOTELS, HOSPITALS, ETC.
Edwards Ice Machine & Supply Co., Oakland, Seattle and Portland.

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El Rey Products Company, 1633 San Pedro St., Los Angeles; 960 Seventh St., San Francisco; 65 Columbia St., Seattle; 850 E. Taylor St., Portland.
The Paraffine Companies, Inc., San Francisco, Oakland, Los Angeles, Portland and Seattle.

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The Sisalkraft Company, 205 W. Wacker Drive, Chicago, Ill.; 55 New Montgomery St., San Francisco and Hammond Lumber Co., Los Angeles.

CONCRETE OR CEMENT HARDENER
Gunn, Carle & Co., Inc., 444 Market St., San Francisco.

CONCRETE REINFORCING
Soule Steel Company, Rialto Bldg., San Francisco.
Gunn, Carle & Co., Inc., 444 Market St., San Francisco.
National Steel Fabric Co., Pittsburgh, Pa.; 351 Bryant Street, San Francisco; 1358 Wholesale Street, Los Angeles; Seattle and Portland.

CONSERVATORIES
Lord & Burnham Co., Irvington, N. Y., and 208 So. LaSalle St., Chicago, Ill.

CONTRACTORS—GENERAL
Spivock & Spivock, Hobart Building, San Francisco, and 412 Water St., Oakland.
Vogt & Davidson, Inc., 185 Stevenson St., San Francisco, and Builders Exchange, Oakland.
K. E. Parker Company, Inc., 135 South Park, San Francisco.
Barrett & Hilp, 918 Harrison St., San Francisco.
Lindgren & Swinerton, Inc., Standard Oil Building, San Francisco.
R. W. Littlefield, 337 17th St., Oakland.
Dinwiddie Construction Co., Crocker Bldg., San Francisco.
Clinton Construction Company, 923 Folsom St., San Francisco.
Monson Bros., 475 Sixth St., San Francisco.
McLaren & Co., R., Hearst Bldg., San Francisco.
Chas. D. Vezey & Sons, Sacramento and Harmon Streets, Berkeley.
Jacks & Irvine, Call Bldg., San Francisco.
Industrial Construction Company, 815 Bryant St., San Francisco.
Anderson & Ringrose, 320 Market St., San Francisco.
G. P. W. Jensen, 320 Market St., San Francisco.
G. W. Williams Co., 1404 Broadway, Burlingame, Calif.
The Dyer Construction Company, 1924 Broadway, Oakland.

CORNER BEAD
Milwaukee Corrugating Co., Milwaukee, Wis., Soule Steel Co., Rialto Bldg., San Francisco, distributors.

CORK TILE
Congoleum-Nairn, Inc., D. N. & E. Walter & Co., San Francisco, and Broadway Department Store, Los Angeles.
Van Fleet-Freear Company, 557 Howard St., San Francisco, and 420 S. Spring St., Los Angeles.

CRIBBING FOR RETAINING WALLS
Massey Concrete Products Corporation, Colton, Calif., and Spokane, Wash.

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Western Asbestos Magnesia Company, 25 South Park, San Francisco.
The Paraffine Companies, Inc., San Francisco, Oakland, Los Angeles, Portland and Seattle.
Gunn, Carle & Co., 444 Market St., San Francisco.

DEADENING MATERIAL
"Insulite" Western Asbestos Magnesia Co., 25 South Park, San Francisco.
The Paraffine Companies, Inc., San Francisco, Oakland, Los Angeles, Portland and Seattle.
Gunn, Carle & Co., 444 Market St., San Francisco.

DOOR CHECKS—CONCEALED
The Condor Company, 58 Sutter St., San Francisco.

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Norton door closer, sold by Nissen-Currier Co., 265 Minna St., San Francisco, and 302 Colo Bldg., Los Angeles.

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Detroit Steel Products Company, 251 Kearny St., San Francisco.
Kinnear Mfg. Co., represented by Gunn, Carle & Co., 444 Market St. San Francisco.

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The Peelle Co., Brooklyn, N. Y., represented by Persona Dwan & Co., 534 Sixth St., San Francisco.

DOORS—HOLLOW METAL
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ALPHABETICAL LIST OF ADVERTISERS ON PAGE 162

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Spencer Elevator Company, 166 7th St., San Francisco.
Elevator Supplies Co., Inc., Hoboken, N. J.; 186 Fifth Street, San Francisco.

ELECTRICAL CONTRACTORS
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H. C. Reed & Co., 389 Clementina St., San Francisco.
Kenyon Electric Company, 526 13th Street, Oakland.

ENGINEERS—CONSULTING, ELECTRICAL, MECHANICAL
Hunter & Hudson, 41 Sutter St., San Francisco.
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ELECTRIC AIR AND WATER HEATERS
Majestic Electric Appliance Company, 590 Folsom St., San Francisco.
Sandoval Sales Company, 557 Market St., San Francisco.
Weir Electric Appliance Company, 26th and Adeline Sts., Oakland.
Wesix electric air heaters, manufactured and distributed by Wesix, Inc., 390 First St., San Francisco.

ELECTRIC REFRIGERATION
General Electric Refrigerator, George Belsey Company, Los Angeles, Distributor; Stores in Los Angeles, Pasadena, Glendale, Hollywood, Santa Monica and Monrovia; L. H. Bennett, Northern California Distributor, 2112 Broadway, Oakland; 318 Stockton St., San Francisco.

ELECTRICAL SUPPLIES and EQUIPMENT
The Frink Company, 10th Ave. at 24th St., New York; 77 O'Farrell St., San Francisco.
Drendell Electrical & Mfg. Co., 1345 Howard St., San Francisco.
Frank Adam Electric Company, 340 Fremont St., San Francisco, and 1127 Wall St., Los Angeles; general offices, St. Louis, Mo.
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., and Crocker First National Bank Bldg., San Francisco.
Sterling Bronze Co., Inc., 18 East 40th St., New York.

ELECTROLIERS
Northern Street Lighting Company 388 Clementina St., San Francisco.

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Dahlstrom Metallic Door Company, Jamestown, N. Y., Pacific Coast plant, 3350 East Slauson Ave., Los Angeles.

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Kimball Elevator Co., 1579 West Jefferson Street, Los Angeles.
Otis Elevator Company, Stockton and North Point, San Francisco.
Spencer Elevator Company, 166 Seventh St., San Francisco.
Westinghouse Electric and Manufacturing Company, Crocker First National Bank Bldg., San Francisco, general offices and works, East Pittsburgh, Pa.
Consolidated Steel Corporation, 1200 N. Main St., Los Angeles.

ELEVATOR SIGNALS, DOOR EQUIPMENT
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The Peelle Co., Brooklyn, N. Y.; represented by Persons Dwan & Co., 534 Sixth St., San Francisco.

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Gold Seal Enamel—Bass-Heuter Paint Company, San Francisco, Los Angeles, Portland, Seattle.

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"Derby" and "Selex" Systems; represented by Hough and Egbert, Inc., 519 Robert Dollar Bldg., San Francisco.

FIRE ESCAPES
Michel & Pfeffer Iron Works, 1415 Harrison St., San Francisco.
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Western Iron Works, 141 Beale St., San Francisco.

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The Parafine Companies, Inc., San Francisco, Oakland, Los Angeles, Portland and Seattle.

FLOORS—REDWOOD BLOCK
Redwood Block Floor Company, Bryant at 18th St., San Francisco.

FLOOR CLIPS
Bull Dog Floor Clip Co., 557 Market St., San Francisco and Hibernian Bldg., Los Angeles.

FLOORS—HARDWOOD
Inlaid Floor Company, 600 Alameda St., San Francisco.
"Perfection" Brand Oak Flooring, Arkansas Oak Flooring Co., Pine Bluff, Arkansas.
Cellized Oak Flooring, Inc., Memphis, Tenn. Represented by Geo. H. Brown Hardwood Company, Oakland.

FLOOR TILE
The Mosaic Tile Co., Zanesville, Ohio; West Coast Offices: E. K. Porter, 568-7th St., San Francisco; O. M. Bendure, 2470 Enterprise St., Los Angeles.

FREIGHT ELEVATOR DOORS
The Peelle Co., Brooklyn, N. Y., represented by Persons Dwan & Co., 534 Sixth St., San Francisco.

FURNITURE—OFFICE, SCHOOL, CHURCH, THEATER
The Fink & Schindler Co., Inc., 218-68 13th St., San Francisco.
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Mullen Mfg. Co., 64 Rausch St., San Francisco.
C. F. Weber & Co., San Francisco, Los Angeles, and Phoenix, Ariz.

GENERAL CONTRACTORS
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Ellery Arms Co., 583 Market St., San Francisco.

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Vonnegut hardware, sold by D. A. Pancoast Company, 605 Market St., San Francisco.
Palace Hardware Company, 581 Market St., San Francisco.
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HARDWOOD LUMBER
G. H. Brown Hardwood Lumber Co., 47th Ave. at E. 12th St., Oakland.

HEATING—COAL FURNACE
Montague Range & Furnace Company, 376 Sixth St., San Francisco.

HEATING—ELECTRIC,
Apex Air and Water Electric Heaters, Sandoval Sales Company, 557 Market St., San Francisco.
Majestic Electric Appliance Co. (bathroom heater), 590 Folsom St., San Francisco.
Weir Electric Appliance Company, 26th and Adeline Sts., Oakland.
Wesix electric air heaters, manufactured and distributed by Wesix, Inc., 390 First St., San Francisco.

HEATING—STEAM
Warren Webster & Company, Sharon Bldg., San Francisco, and 306 Crocker St., Los Angeles.

HEATING CONTRACTORS
Gilley-Schmid Company, 198 Otis St., San Francisco.
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Luppen & Hawley, 3126-J St., Sacramento.
William F. Wilson Co., 240 Fourth St., San Francisco.
James A. Nelson, Inc., Howard and Tenth Sts., San Francisco.
Scott Company, 243 Minna St., San Francisco.
Geo. A. Schuster, 4712 Grove St., Oakland.

HEATING EQUIPMENT
E. A. Cornely, Inc., 1452 Bush St., San Francisco.
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James A. Nelson, Inc., Howard and Tenth Sts., San Francisco.
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C. A. Dunham Company, Dunham Bldg., 450 Ohio St., Chicago, and principal Coast cities.

HOLLOW BUILDING TILE (Burned Clay)
Cannon & Co., plant at Sacramento; Call Bldg., San Francisco.
N. Clark & Sons, 112-116 Natoma St., San Francisco; works, West Alameda, Calif.
Gladding, McBean & Co., 660 Market St., San Francisco; 621 S. Hope St., Los Angeles; 1500 First Ave. South, Seattle; 454 Everett St., Portland; 15th and Dock Sts., Tacoma, and 22nd and Market Sts., Oakland.
W. S. Dickey Clay Mfg. Co., San Francisco and Oakland.

HOME BUILDERS
G. W. Williams Co., 1404 Broadway, Burlingame, Calif.

HOSE
The American Rubber Mfg. Co., Park Ave. and Watts St., Oakland, Calif.

HOSE RACKS AND REELS
American Rubber Mfg. Co., San Francisco, Oakland, Los Angeles and Portland, Ore.

HOSPITAL SIGNAL SYSTEMS
Chicago Signal Co., represented by Garnett Young & Co., 390 Fourth St., San Francisco.

ICE RINK CONSTRUCTION
The Dyer Construction Company, 1924 Broadway, Oakland.

INCINERATORS
The Goder, sold by M. E. Hammond, 557 Market St., San Francisco.
Kewanee Boiler Co., 637 Minna St., San Francisco.

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INSPECTIONS AND TESTS
Robert W. Hunt Co., 251 Kearny St., San Francisco.

INSULATION
"Insulex" manufactured by Pacific Portland Cement Co., Hunter-Dulin Bldg., San Francisco, and 1200 Chapman Bldg., Los Angeles.
Western Asbestos Magnesia Co., 25 South Park, San Francisco.
Gunn, Carle & Co., 444 Market St., San Francisco.
Ric-wil distributed by H. G. Sperry Co., 74 New Montgomery St., San Francisco.

INSULATED WIRE
Hazard Insulated Wire Works, Wilkes-Barre, Pa., Russ Building, San Francisco, Seattle and Los Angeles.

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S. & G. Gump Company, 246 Post St., San Francisco, and Honolulu, T. H.

KITCHEN EQUIPMENT
General Electric Refrigerator, L. H. Bennett, Rialto Building, San Francisco, and the George Belsey Company, Architects Building, Los Angeles.

« CLASSIFIED LIST of ADVERTISERS for ARCHITECT'S REFERENCE »

ALPHABETICAL LIST OF ADVERTISERS ON PAGE 162

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McCray Refrigerator Sales Corp., Kendallville, Indiana; San Francisco office, 765 Mission Street.

LACQUERS
The Paraffine Companies, Inc., San Francisco, Los Angeles, Oakland, Portland and Seattle.
Bass-Hueter Paint Company, San Francisco, and all principal Coast cities.
"Nitrolac" manufactured by R. N. Nason & Co., 151 Potrero Ave., San Francisco.

LANDSCAPE ARCHITECTS
Neal T. Childs, Menlo Park, California.

LATHING MATERIAL—WIRE, METAL, ETC.
Genfire Steel Co., Sheldon Bldg., San Francisco; Builders' Exchange, Oakland.
Truscon Steel Co., Sharon Building, San Francisco.
Soule Steel Company, Rialto Building, San Francisco, and Los Angeles.
"Steeltex" manufactured by National Steel Fabric Co., Pittsburgh, Pa.; 351 Bryant Street, San Francisco. 1358 Wholesale Street, Los Angeles; Seattle and Portland.

LAUNDRY MACHINERY AND EQUIPMENT
Troy Laundry Mach'y Co., Ltd., East Moline, Ill., and 951 Mission St., San Francisco.
Gunn, Carle & Co., 444 Market St., San Francisco.

LIGHTING FIXTURES, OUTLETS, ETC.
Westinghouse Electric and Mfg. Co., Crocker First National Bank Bldg., San Francisco; general offices and works, East Pittsburgh, Pa.
The Frink Company, 369 Lexington Avenue, New York, and principal Coast cities.
Sterling Bronze Co., Inc., 18 East 40th St., New York.

LINOLEUM
William Volker & Co., 631 Howard St., San Francisco, and 2301 E. 7th St., Los Angeles.
The Paraffine Companies, factory in Oakland; office, 475 Brannan Street, San Francisco.
W. & J. Sloane, 216 Sutter Street, San Francisco.
Van Fleet-Freear Company, 557 Howard St., San Francisco, and 3307 Wilshire Boulevard, Los Angeles.
Bonded Floors—Sealex Linoleum and Tile manufactured by Congoleum-Nairn, Inc., D. N. & E. Walter & Co., San Francisco; Broadway Department Store, Los Angeles.

LUMBER
G. H. Brown Hardwood Company, 1044 47th Ave., Oakland.
Pacific Mfg. Co., San Francisco, Oakland, Los Angeles and Santa Clara.
Santa Fe Lumber Co., 16 California St., San Francisco.
Sunset Lumber Company, First and Oak Sts., Oakland.
E. K. Wood Lumber Co., Frederick and King Streets, Oakland.
Port Orford Cedar Products Co., Marshfield, Oregon, represented by Dant & Russell, Inc., Porter Bldg., Portland, Oregon.

MAIL CHUTES
Cutler Mail Chute Co., represented by Price Building Specialties Co., 683 Howard St., San Francisco and Continental Building Specialties Co., 1216 Hibernian Bldg., Los Angeles.

MARBLE
American Marble Company, 25 Columbus Square, San Francisco.
Clervi Marble Company and Mosaic Co., 1721 San Bruno Avenue, San Francisco.
Ray Cook Marble Company, foot of Powell St., Oakland.
Joseph Musto Sons-Keenan Co., 535 N. Point St., San Francisco.
Vermont Marble Co., Coast branches, San Francisco, Los Angeles and Tacoma.
Tompkins-Kiel Marble Company, 505 Fifth Ave., New York, also Chicago, Philadelphia and San Francisco.

MARBLE HARDWARE
M. Greenberg's Sons, 765 Folsom St., San Francisco; 122 E. Seventh St., Los Angeles; 101 N. 5th St., Portland; 1103 Post St., Seattle.

MASONRY ANCHORS
Steelform Contracting Company, Monadnock Bldg., San Francisco; Edwards & Wildey Bldg., Los Angeles.

METAL COVERED DOORS
Fire Protection Products Co., 1101 Sixteenth St., San Francisco.
Forderer Cornice Works, Potrero Ave., San Francisco.

METAL LATH (Stay-Rib)
Milwaukee Corrugating Co., Milwaukee, Wis., Soule Steel Co., Rialto Bldg., San Francisco, distributors.

MILLWORK
The Fink & Schindler Co., Inc., 218-68 13th St., San Francisco.
Pacific Mfg. Co., San Francisco, Los Angeles, Oakland and Santa Clara.
Sunset Lumber Company, First and Oak Streets, Oakland.
Lannom Bros. Mfg. Co., Fifth and Magnolia Sts., Oakland.
Chicago Lumber Company of Washington, 66th and 69th Aves. and Spencer Street, Oakland.
E. K. Wood Lumber Co., Frederick and King Streets, Oakland.

MONEL METAL
"Inco" brand, distributed on the Pacific Coast by the Pacific Foundry Company, Harrison and 18th Streets, San Francisco, and Eagle Brass Foundry, Seattle, Wash.

OBJECTS OF ART
S. & G. Gump Company, 246 Post St., San Francisco, and Honolulu, T. H.

OIL BURNERS
Rayfield Oil Burner, Coast Distributors, E. A. Coruely, Inc., 1452 Bush Street, San Francisco.
S. T. Johnson Company, 1337 Mission St., San Francisco; 940 Arlington St., Oakland; 1729 Front St., Sacramento, and 230 N Sutter St., Stockton.
Vaughn-G. E. Witt Co., 4224-28 Hollis Street, Emeryville, Oakland.
Coen Company, 112 Market Street, San Francisco.
California Hydro-Oil Burner, Inc., 1714 Sixteenth Street, Oakland.

ORNAMENTAL IRON AND BRONZE
Federal Ornamental Iron and Bronze Co., 16th St. and San Bruno Ave., San Francisco.
Michel & Pfeffer Iron Works, 1415 Harrison St., San Francisco.
Palm Iron and Bridge Works, Sacramento.

PAINTING, DECORATING, ETC.
The Tormey Co., 681 Geary St., San Francisco.
A. Quandt & Sons, 374 Guerrero Street, San Francisco.
D. Zelinsky & Sons, Inc., 165 Grove St., San Francisco.

PAINTS, OILS, ETC.
The Paraffine Companies, Inc., San Francisco, Los Angeles, Oakland, Portland and Seattle.
Bass-Hueter Paint Company, San Francisco, Los Angeles, Portland, Seattle.
R. N. Nason & Co., 151 Potrero Ave., San Francisco.

PANEL BOARDS
Drendell Electric & Mfg. Co., 1760 Howard St., San Francisco.
Frank Adam Electric Company, 340 Fremont St., San Francisco, and 1127 Wall Street, Los Angeles; general offices, St. Louis, Mo.
Westinghouse Elec. and Mfg. Co., Crocker First National Bank Bldg., San Francisco; general offices and works, East Pittsburgh, Pa.

PANIC EXIT DEVICES
Von Duprin, manufactured by Vonnegut Hardware Company, Indianapolis; sold by D. A. Pancoast Co., 605 Market Street, San Francisco.

PARTITIONS—MOVABLE OFFICE
Dahlstrom Metallic Door Company, Jamestown, N. Y., Coast plant, 3350 E. Slauson Ave., Los Angeles.
Pacific Mfg. Co., Monadnock Building, San Francisco; factory at Santa Clara.

PENCILS AND ERASERS
A. W. Faber Company, Newark, N. J., represented by Cahen, Davis & Company, 313 Severance Bldg., Los Angeles, Calif.

PIPE—WROUGHT IRON
Reading Iron Co., Reading, Pa., and Balboa Bldg., San Francisco.

PLASTER
"Empire," manufactured by Pacific Portland Cement Co., Hunter-Dulin Building, San Francisco, Portland, San Jose and Los Angeles.

PLASTER BASE
"Celotex," Western Asbestos Magnesia Co., 25 South Park, San Francisco.

PLASTERING CONTRACTORS
A. Knowles, Call Bldg., San Francisco.
MacGruer & Company, 266 Tehama Street, San Francisco, and Pacific Mutual Bldg., Los Angeles.

PLUMBING CONTRACTORS
Gilley-Schmid Company, 198 Otis St., San Francisco.
Hateley & Hateley, 1710 Tenth St., Sacramento.
Luppen & Hawley, 906 7th St., Sacramento.
Scott Co., Inc., 243 Minna St., San Francisco.
Wm. F. Wilson Co., 248 Fourth Street, San Francisco.
Geo. A. Schuster, 4712 Grove St., Oakland.
W. H. Picard, 5656 College Ave., Oakland.

PLUMBING SUPPLY HOUSES
Standard Pacific Fixtures, 349 Sutter St., San Francisco.
Tay-Holbrook, Inc., 165 8th Street, San Francisco.
Clarence Drucker, manufacturers' representative, 307 Minna St., San Francisco.
Walworth Company, Boston, Mass., San Francisco office, 235 Second Street.

PLYWOOD
Port Orford Cedar Products Co., Marshfield, Oregon, represented by Dant & Russell, Inc., Porter Bldg., Portland, Oregon.

PRESSED STEEL
Berger Manufacturing Co., 1120 Mission St., San Francisco.

PRESSURE REGULATORS
Vaughn-G. E. Witt Co., 4224-28 Hollis Street, Emeryville, Oakland.

PUMPING MACHINERY
Simonds Machinery Co., 816 Folsom Street, San Francisco; 6220 East 4th Street, Los Angeles.

PUMPS—HAND OR POWER
Ocean Shore Iron Works, 558 Eighth St., San Francisco.
S. F. Bowser & Co., Inc., 425 Brannan St., San Francisco.

REFRIGERATORS
"General Electric," sold by the George Betsey Company, Architects Building, Los Angeles; L. H. Bennett, Rialto Bldg., San Francisco.
McCray Refrigerator Sales Corp., Kendallville, Indiana; San Francisco office, 765 Mission Street.

REINFORCING STEEL
Soule Steel Company, Inc., Rialto Bldg., San Francisco, and Los Angeles.
Gunn, Carle & Co., Inc., 444 Market St., San Francisco.
United Alloy Steel Corporation, Canton, Ohio; Western Sales Office, Santa Fe Bldg., San Francisco.
Truscon Steel Company, Sharon Bldg., San Francisco.

ROOF CONTRACTORS
General Roofing Company, Beach and Halleck Streets, Oakland.

ROOF MATERIALS
El Rey Products Co., 1633 San Pablo St., Los Angeles; 960 7th St., San Francisco; 65 Columbia St., Seattle; 850 E. Taylor St., Portland.
Kraftile Company, office and factory at Niles; show room, 55 New Montgomery Street, San Francisco.
"Malthoid" and "Ruberoid," also "Pabco" 10 and 20 year roofs, manufactured by the Paraffine Companies, Inc., San Francisco, Los Angeles, Oakland, Portland and Seattle.
Gladding, McBean & Co., 660 Market St., San Francisco; 621 S. Hope St., Los Angeles; 1500 First Ave. South, Seattle; 454 Everett St., Portland; 15th and Dock Sts., Tacoma, and 22nd and Market Sts., Oakland.
N. Clark & Sons, 112-116 Natoma Street, San Francisco; works, West Alameda, California.
W. S. Dickey Clay Mfg. Co., Rialto Bldg., San Francisco.
Johns-Manville Corporation of California, 159 New Montgomery St., San Francisco.
The United Materials Company, 625 Market St., San Francisco.
Western Asbestos Magnesia Company, 25 South Park, San Francisco.
Pioneer Paper Co., 5500 South Alameda, Los Angeles; Hearst Bldg., San Francisco; offices in Portland, Seattle, Salt Lake City, Spokane and Denver.
General Roofing Company, Beach and Halleck Streets, Oakland.

ROOF MATERIALS (Two-Drain Metal Roofing & Copper Tile)
Milwaukee Corrugating Co., Milwaukee, Wis., Soule Steel Co., Rialto Bldg., San Francisco, distributors.

RUGS AND CARPETS—IMPORTED
Kent-Costikyan, Inc., 485 Fifth Ave., New York City, with offices at 442 Post St., San Francisco and 816 South Figueroa St., Los Angeles.
W. & J. Sloane, 216 Sutter St., San Francisco.

« CLASSIFIED LIST of ADVERTISERS for ARCHITECT'S REFERENCE »

ALPHABETICAL LIST OF ADVERTISERS ON PAGE 162

SAFETY TREADS
Price-Teltz Company, 683 Howard St., San Francisco.
Gunn, Carle & Co., 444 Market St., San Francisco.

SASH CHAINS
American Chain Company, Inc., Bridgeport, Conn., and 425 Second St., San Francisco.
The Smith & Egge Mfg. Co., P. O. Box 1040, Bridgeport, Conn.; 506 American Bank Bldg., Los Angeles.

SCAFFOLDING FOR CONTRACTORS
Steelform Contracting Company, Monadnock Bldg., San Francisco; Edwards & Wildey Bldg., Los Angeles.

SEATING—SCHOOL, THEATER, CHURCH
Home Manufacturing Company, Inc., 552 Brannan St., San Francisco.
C. F. Weber & Co., San Francisco, Los Angeles, Phoenix, Ariz.; Reno, Nevada.

SELF-RELEASING FIRE EXIT DEVICES
Von Duprin, manufactured by Vonnegut Hardware Company, Indianapolis; sold by D. A. Pancoast Co., 601 Market St., San Francisco.

SHADES
William Volker & Co., 631 Howard Street, San Francisco; 2301 East 7th Street, Los Angeles.

SHEATHING
The Sisalkraft Company, 205 W. Wacker Drive, Chicago, Ill.; 55 New Montgomery St., San Francisco and Hammond Lumber Co., Los Angeles.

SHEATHING AND SOUND DEADENING
Western Asbestos Magnesia Co., 25 South Park, San Francisco.

SHEET METAL WORKS
Forderer Cornice Works, Potrero Ave., San Francisco.

SHOW CASES
Home Manufacturing Company, Inc., 552 Brannan St., San Francisco.
Mullen Manufacturing Company, 64 Rausch St., San Francisco.

SHOWER DOORS—GLASS SHIELDS
M. Greenberg's Sons, 765 Folsom St., San Francisco; 122 E. Seventh St., Los Angeles; 101 N. 5th St., Portland; 1103 Post St., Seattle.

SOUND ABSORBING TREATMENT
Johns-Manville Corporation, 159 New Montgomery St., San Francisco.

SIGNALING & PROTECTIVE SYSTEMS
Garnett, Young & Co., 390 Fourth St., San Francisco.

SLUDGE BED GLASS-OVERS
Lord & Burnham Co., Irvington, N. Y., and 208 So. La Salle St., Chicago, Ill.

STANDPIPE SIAMESE AND VALVES
M. Greenberg's Sons, 765 Folsom St., San Francisco; 122 E. Seventh St., Los Angeles; 101 N. 5th St., Portland; 1103 Post St., Seattle.

STEEL FABRIC
Soule Steel Company, Rialto Bldg., San Francisco, and Los Angeles.
National Steel Fabric Co., Pittsburgh, Pa.; 351 Bryant Street, San Francisco; 1358 Wholesale Street, Los Angeles; Seattle and Portland.

STEEL FORMS
Steelform Contracting Company, Monadnock Bldg., San Francisco; Edwards & Wildey Bldg., Los Angeles.

STEEL TANKS
Ocean Shore Iron Works, 55 Eighth St., San Francisco.

STEEL LUMBER
Genfire Steel Co., Sheldon Bldg., San Francisco; Builders' Exchange, Oakland.

STEEL SASH
Bayley-Springfield solid steel sash, sold by Gunn, Carle & Co., 444 Market St., San Francisco.
"Fenestra" Solid Steel Sash, manufactured by Detroit Steel Products Co., factory sales office, 526 Hunter-Dulin Bldg., San Francisco.
Berger Manufacturing Co., 1120 Mission St., San Francisco.
Michel & Pfeffer Iron Works, 1415 Harrison St., San Francisco.
Truscon Steel Company, 74 New Montgomery St., San Francisco.
W. S. Lea, 653 South Clarence St., Los Angeles.

STEEL—STRUCTURAL
Bethlehem Steel Company, Pittsburg, Pa., Matson Building, San Francisco; Pacific Building, Los Angeles; L. C. Smith Building, Seattle; American Bank Building, Portland, Oregon.
Golden Gate Iron Works, 1541 Howard St., San Francisco.
Judson Pacific Company, C. F. Weber Bldg., Mission and Second Sts., San Francisco, shops, San Francisco and Oakland.
McClintic-Marshall Company, 2050 Bryant Street, San Francisco.
Herrick Iron Works, 18th and Campbell Sts., Oakland.
Pacific Coast Eng. Co., foot 14th St., Oakland.
Palm Iron & Bridge Works, Sacramento.
Schrader Iron Works, Inc., 1247 Harrison St., San Francisco.
Western Iron Works, 141 Beale Street, San Francisco.
Consolidated Steel Corporation, 1200 N. Main St., Los Angeles.

STORE FURNITURE
Berger Manufacturing So., 1120 Mission St., San Francisco.

STREET LIGHTING EQUIPMENT
Westinghouse Electric and Mfg. Co., East Pittsburgh, Pa., and Crocker First National Bank Bldg., San Francisco.

STRUCTURAL STEEL SHAPES
Bethlehem Steel Company, Matson Building, San Francisco; Pacific Finance Building, Los Angeles; L. C. Smith Building, Seattle; American Bank Building, Portland, Oregon.

SUN TAN ROOMS
Lord & Burnham Co., Irvington, N. Y., and 208 So. La Salle St., Chicago, Ill.

SWIMMING POOL GLASS ENCLOSURES
Lord & Burnham Co., Irvington, N. Y., and 208 So. La Salle St., Chicago, Ill.

SWITCHES AND SWITCHBOARDS
Drendell Electrical & Mfg. Co., 1345 Howard St., San Francisco.
Westinghouse Elec. & Mfg. Co., Crocker First Nat. Bank Bldg., San Francisco; general offices and works East Pittsburgh, Pa.

TELEPHONE SERVICE ARRANGEMENTS
All Bell Telephone Companies. Apply nearest Business Office, or American Telephone and Telegraph Company, 195 Broadway, New York.

THERMOSTATS FOR HEAT REGULATION
Johnson Service Company, Milwaukee, Wis.; Rialto Building, San Francisco.

TERRA COTTA
N. Clark & Sons, 116 Natoma Street, San Francsco.
National Terra Cotta Society, 230 Park Avenue, New York, N. Y.
Gladding-McBean & Co., San Francisco, Los Angeles, Portland and Seattle.

TILE—RUBBER, CLAY, CORK, ETC.
Rossman Corporation of California, 49 Geary Street, San Francisco and Architects' Bldg., Los Angeles.
N. Clark & Sons, 112-116 Natoma Street, San Francisco; works, West Alameda, Cal.
Congoleum-Nairn, Inc., D. N. & E. Walter & Co., San Francisco, and Broadway Department Store, Los Angeles.
Gladding, McBean & Co., 660 Market St., San Francisco; 621 S. Hope St., Los Angeles; 1500 First Ave. South, Seattle; 454 Everett St., Portland; 15th and Dock Sts., Tacoma, and 22nd and Market Sts., Oakland.
Kraftile Company, factory at Nilee; 55 New Montgomery Street, San Francisco.
Mangrum-Holbrook, Inc., 1235 Mission St., San Francisco.
United States Rubber Co., 300 Second St., San Francisco, and 923 Los Angeles St., Los Angeles, Calif.
Armstrong Cork Tile, sold by Van Fleet-Freear Co., 557 Howard Street, San Francisco; 3307 Wilshire Boulevard, Los Angeles.
The Mosaic Tile Co., Zanesville, Ohio; West Coast offices: E. K. Porter, 568 - 7th St., San Francisco; O. M. Bendure, 2470 Enterprise St., Los Angeles.

UNDERGROUND CONDUIT
Ric-wil distributed by H. G. Sperry Co., 74 New Montgomery St., San Francisco.

UNDERFLOOR DUCT SYSTEM
Johns-Manville Corporation, 159 New Montgomery St., San Francisco.

VACUUM HEATING SYSTEM
C. A. Dunham Company, Dunham Bldg., 450 Ohio St., Chicago, and principal Coast cities.

VALVES—PIPES AND FITTINGS
Clarence Drucker, Manufacturers' Agent, 307 Minna Street, San Francisco.
Grinnell Co., Fifth and Brannan Sts., San Francisco.
Sloan Valve Company, Chicago; E. C. Whalen, 954 Western Pacific Bldg., Los Angeles; W. J. Driscoll, 482 Monadnock Bldg., San Francisco; E. C. Fallein, U. S. National Bank Bldg., Denver; S. D. Cochran, L. C. Smith Bldg., Seattle, Wash.

VARNISHES
Bass-Hueter Paint Company, San Francisco, Los Angeles, Portland, Seattle.
The Paraffine Companies, Inc., San Francisco, Los Angeles, Portland and Seattle.
R. N. Nason & Co., 151 Potrero Ave., San Francisco.

VENETIAN BLINDS
C. F. Weber & Company, 601 Mission St., San Francisco.

VENTILATING EQUIPMENT
B. F. Sturtevant Co., Monadnock Bldg., San Francisco; Los Angeles, Portland and Seattle.

VENTILATORS
"The Panelouvre," sold by M. E. Hammond, Pacific Bldg., San Francisco.

VITREOUS CHINAWARE
Standard-Pacific Plumbing Fixtures, 349 Sutter St., San Francisco; 919 W. Seventh St., Los Angeles; 1301 Fifth Ave., Seattle Wash.; 48 Fifth St., Portland, Ore.

WATER HEATERS—GAS
Pittsburg Water Heater Company, (gas), 478 Sutter Street, San Francisco.

WALL BEDS, SEATS, ETC. (See Beds),

WATER COOLERS
General Electric Refrigerator, L. H. Bennett, Rialto Building, San Francisco, and the George Belsey Company, Architects Building, Los Angeles.

WALL BEDS
Marshall & Stearns, Phelan Building, San Francisco.
Rip Van Winkle Wall Bed Co., 51 Second St., San Francisco, and 792 22nd St., Oakland.

WALL TILE
The Mosaic Tile Co., Zanesville, Ohio; West Coast Offices: E. K. Porter, 568-7th St., San Francisco; O. M. Bendure, 2470 Enterprise St., Los Angeles.

WATERPROOFING
Johns-Manville Corporation, 159 New Montgomery St., San Francisco.
The Paraffine Companies, Inc., San Francisco, Los Angeles, Oakland, Portland, Seattle.
Gunn, Carle & Co., 444 Market St., San Francisco.
The Sisalkraft Company, 205 W. Wacker Drive, Chicago, Ill.; 55 New Montgomery St., San Francisco and Hammond Lumber Co., Los Angeles.

WATER SUPPLY SYSTEMS
Kewanee Water Supply System — Simonds Machinery Co., agents, 816 Folsom St., San Francisco; 520 East Fourth Street, Los Angeles.

WINDOW SHADES
William Volker & Co., 631 Howard Street, San Francisco; 2301 East 7th Street, Los Angeles.
W. & J. Sloane, 216 Sutter St., San Francisco.
D. N. & E. Walter & Co., 562 Mission St., San Francisco.

WINDOWS—STEEL, REVERSIBLE, ETC.
Campbell and Voigtmann Metal Windows, distributed by Fire Protection Products Company, 1101 Sixteenth St., San Francisco.
Crittall Casement Window Company, Detroit, Mich. Badt-Falk & Co., 74 Montgomery Street, San Francisco. F. T. Crowe & Co., 216 Walker Bldg., Seattle. R. H. Hoskins, 510 Hyde Bldg., Spokane. McCracken-Ripley Co., 61 Albina Avenue, Portland. F. T. Crowe & Co., 1177 Dock Street, Tacoma, Wash. Crittall Casement Window Co., 504 Union Insurance Bldg., Los Angeles.
Hauser Window Co., 1362 Harrison St., San Francisco.
Detroit Steel Products Co., Detroit, Mich.; Hunter-Dulin Building, San Francisco and Pershing Square Building, Los Angeles.
W. C. Lea, 653 South Clarence St., Los Angeles,

WINDOWS, BASEMENT
Milwaukee Corrugating Co., Milwaukee, Wis., Soule Steel Co., Rialto Bldg., San Francisco, distributors.

WIRING SYSTEM
Westinghouse Electric and Manufacturing Company, Crocker First National Bank Bldg., San Francisco; general offices and works, East Pittsburgh, Pa.

SANTA BARBARA AWARDS

[Concluded from Page 110]

from the special buildings submitted because they seemed to have excellence, there were many times more buildings put up during the last two years of a very poor quality of design or architecture which are not a credit to the city and in many cases depreciative to their neighbors.

"These ugly uneconomic structures are entirely unnecessary where trained architects' services are readily available. Santa Barbara showed the world how to avoid them in the great years of 1925 and 1926, when it had the municipal board of review and it is hoped that administrative machinery will again be provided to head off the careless and off-color buildings that are such a millstone on any community."

ARCHITECTURAL CONGRESS AT BUDAPEST

The executive committee of the Twelfth International Congress of Architects has issued a bulletin of general information with regard to the arrangements for and the program of the Congress.

The secretary of the American section of the Permanent International Committee, which is entrusted with preparatory work in the United States, is George Oakley Totten, Jr., 808 Seventeenth Street, N. W., Washington, D. C. At Mr. Totten's request those sections of the bulletin of the Congress which are of particular interest to American architects are quoted as follows:

The C. P. I. A., International Permanent Committee of Architects, have accepted the kind invitation of the Hungarian Government and of the Capital of Budapest to the XII. International Congress of Architects, which will take place in Budapest in 1930. The Hungarian Section of the C. P. I. A. together with the Hungarian Societies of Architects, have undertaken the organization of the Congress.

The conferences will begin in Budapest on the 8th, and will last till the 14th of September. In connection with these conferences, excursions and an International exhibition of architectural plans and designs will be arranged. During the excursions we intend to show the members of the Congress the architectural development of our Capital, the representative, as well as the industrial and commercial buildings (with regard to the 4th theme of the debates). The International Exhibition is intended to demonstrate the architectural development, since the war, in the most important countries.

Subject Themes of Debates

1. The economical education of architects.
2. The results obtained hitherto by the Chamber of architects.
3. The intellectual ownership of the architects.
4. The roll of the architects in the industrial buildings.
5. The acoustics of large halls.

Rules of the Exhibition

The following rules will be in force for the International Exhibition of Architecture which will take place from 7th to 22nd of September, 1930, on the occasion of the XIIth International Congress of Architects:

General Regulations

1. Architects of every nation are admitted to take part in the exhibition on condition that they inform the Executive Committee not later than the 15th of February, 1930 through their respective national section of the Permanent Committee of Architects or through the federation or association of architects invited by the said section to regulate all matters regarding the exhibition. In those countries where the C. P. I. A. has not yet established a national section, the federation or association of architects of the respective country will be commissioned to advise the Executive Committee.

The Executive Committee can only negotiate regarding the exhibition with the respective national section or with the national federation or association of architects. The collective name "National Corporation" is used in these regulations to denote either one or other of these three groups.

2. Foreign architects are recommended to send to the exhibition, as far as possible, only such works as have been completed during recent years and preferably works which have not yet been exhibited or published.

3. Any National Corporation desiring to exhibit shall declare, not later than 15th February, 1930, the amount of space required to hang their drawings, plans, photographs or to exhibit their models, in order that the Executive Committee may allot the space at their disposal for the exhibition. Regarding these allotments the decisions of the Executive Committee will be final and without appeal.

4. The selection of works to be exhibited by architects of foreign nations must be made by their respective national jury. The selection of works belonging to the Hungarian groups will be regulated by a jury elected by the Executive Committee. Only those works may be exhibited which have been accepted by the national juries and sent in by the national corporations. No individual entry will be accepted or exhibited by the executive committee. Any entry of this kind will be returned unopened to the sender and at his expense.

5. Each national jury will be elected by the National Corporation mentioned in article 1.

SALVATION ARMY BUILDING

Plans have been completed and construction will start shortly on a seven-story steel frame and concrete building for the Salvation Army at 15th and Grove Streets, Oakland. The building will cost $400,000. Architect is Douglas Dacre Stone.

OAKLAND MAGNIN BUILDING

The proposed new building for I. Magnin & Company is to go forward at once, from plans by Messrs. Weeks and Day of San Francisco. The owners are preparing to spend $150,000 on the improvements.

CONVENTIONS AND EXHIBITIONS

April 2-June 1—Students' Architectural Exhibition, State Building, Exposition Park, Los Angeles.
April 7-18—"Honor Award" Exhibition, Architects' Building, Los Angeles.
April 20 to May 5—Third Annual Decorative Art Exhibition, Women's City Club, 465 Post street, San Francisco.
May 4 to June 1—Annual Exhibition of San Francisco Art Association, Palace of the Legion of Honor, San Francisco.
May 20-October 1—Exhibition of Modern Industrial and Decorative Arts, Stockholm, Sweden.
May 21-23—American Institute of Architects, sixty-third convention, Mayflower Hotel, Washington, D. C.
May 26-30—International Congress of Building and Public Works, London.
June 19-30—Pan-American Congress of Architects, Rio de Janeiro, Brazil.
September—International Architects' Congress, Budapest, Hungary.
October 10-11—Third annual meeting State Association of California Architects, Del Monte and Monterey, California.

MOVED TO LOS ANGELES

Western headquarters of the Berger Manufacturing Company of Canton, Ohio, has been moved from San Francisco to 2458 Hunter Street, Los Angeles, with A. S. Tiedeman remaining as manager. The San Francisco office will be maintained as a branch with E. A. Reichert in charge.

The Berger Manufacturing Company recently consolidated with the Republic Iron & Steel Company, making it the third largest organization of its kind in the United States, according to Mr. Tiedeman. The company is also a subsidiary of the Central Alloy Steel Company of Canton.

SOMMER & KAUFMANN BUILDING

That New York is recognizing more and more the ability of California men to execute unusually fine work, is again noted in the fact that Kem Weber, San Francisco and Hollywood designer of the modern school and designer of the new Sommer & Kaufmann Building, received a call recently from the owners of a fashionable Fifth Avenue dress shop to come to New York and consult with them in regard to designing a complete new interior for their seven story establishment.

This call came as a direct result of Mr. Weber's work on the Sommer & Kaufmann Building, which is attracting the attention of art critics throughout the country and is considered one of the finest examples of modern architecture in the United States. Photographs of the building are shortly to be taken for early reproduction in The Architect and Engineer.

CONTRACTORS IN NEW HOME

It is becoming quite the thing for San Francisco and East Bay contracting firms to build their own office and warehouse with enough ground area to provide yard room for storage of building equipment. One of the newest buildings of this type has just been finished at Sacramento and Harmon Streets,

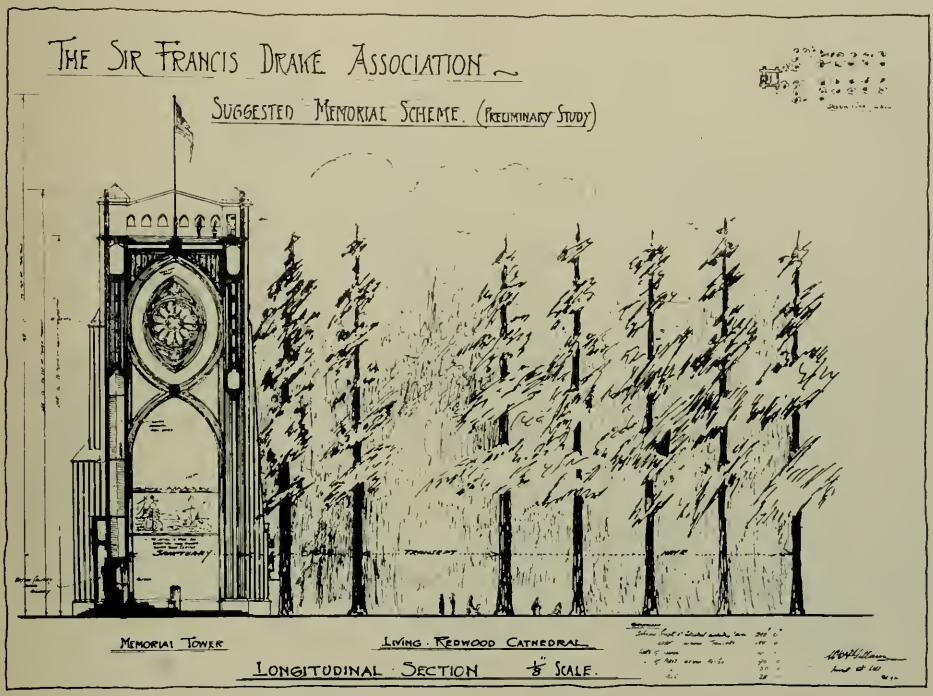
NEW HOME OF CHAS. D. VEZEY & SONS, BERKELEY

Berkeley, close to the Oakland line, by Chas. D. Vezey and Sons. This firm for many years operated as Lawton & Vezey. Two years ago Mr. Lawton retired from the company and is now in Los Angeles. C. D. Vezey took into partnership his two sons, C. D. Vezey, Jr., and W. D. Vezey and they have successfully carried on the business as indicated by the volume of contracts completed in that period. Following is a partial list: Lezear School, Oakland; new plant for the Bunting Iron Works; additions to the Marchant factory; dormitory for blind boys at the State Institution, Berkeley; Southern Pacific Signal Shops, Oakland; refectory building for the State of California, Ione, and the Gottschaux store building in San Leandro.

DECORATIVE ARTS EXHIBITION

The San Francisco Society of Women Artists and the Women's City Club announce the third annual Decorative Arts Exhibition, which will open on Saturday evening, April 19, in the auditorium of the Women's City Club, 465 Post Street, San Francisco. The Exhibition will be open to the public daily from 10 a. m. to 10 p. m. up to (and including) May 4th.

The Decorative Arts Exhibition has become a definite part in the art life of San Francisco. It has been sponsored by the San Francisco Society of Women Artists as a means of focusing the attention of Cali-



PRELIMINARY STUDY FOR SIR FRANCIS DRAKE MEMORIAL
W. C. F. Gillam, Architect

fornians on the development of California art in industry, and following the usual custom, only work designed and executed in California will be accepted.

The San Francisco Chapter, American Institute of Architects, appreciating the opportunity the modern movement affords for the artist and architect to work together, has yearly co-operated on the planning of the Exhibition. The general decorative scheme of the auditorium this year was drawn by William I. Garren.

Mr. Garren's plan calls for eight stained glass, 14 foot tall windows which will serve to illuminate the upper portion of the auditorium. The artists who are designing the windows are working directly on the glass and the problem of obtaining a clear, transparent color has been the means of considerable experimenting. The alcoves down stairs, which constitute the main exhibition galleries, will present a modern living room, a man's den, a modern dinette, a bath-dressing room, a woman's dressing room and other modern arrangements for interiors.

It is interesting to observe, as one reviews the plans, the dissimilarity of this year's exhibition to that of its predecessor. Though both have been drawn with the purpose of displaying modern arrangements in a harmonious atmosphere, they are utterly unlike in conception and approach, a fact that augurs well for future exhibitions.

VINDICATION FOR ARCHITECTS

Church organizations which backed the new William Taylor Hotel will have to pay $38,000 damages to Miller & Pflueger, architects, under a contract they later repudiated, it was decided recently by a jury in Superior Judge Griffin's court. The defendants included the Central, Howard Street and Wesley Methodist Episcopal churches.

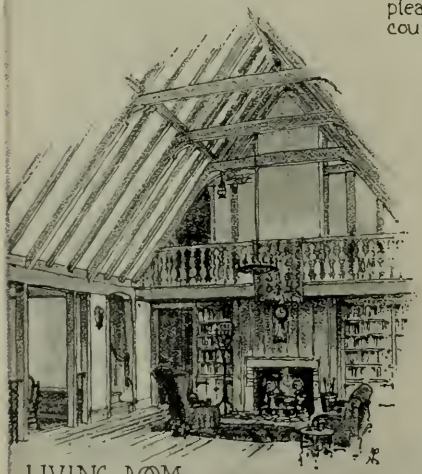
Though the churches repudiated their contract and arbitrarily terminated their employment on April 22, 1927, the architects declared, the owners went ahead and erected the building with but slight deviation from the plans furnished them by Miller & Pflueger, according to court testimony.

The jury decided this was not a proper procedure. The plaintiffs asked $81,600 in the original complaint.

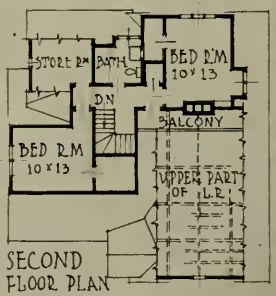
HOME OF MR. HOWARD WEAVER. PORTLAND, ORE.
THAYNE J. LOGAN, ARCHITECT.

Here the natural coloring of wood shingles melts into the beauty of shrubs and trees making a most attractive composition. The irregular coursing of the roof shingles contrasts pleasantly with the straight courses on the walls.

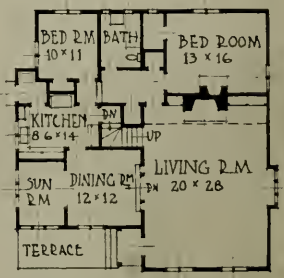
The rustic bench, so frequently misused as a decorative feature here provides exactly the right note of transition from the growing trees to the softly toned walls. Advantage has been taken of the opportunity for a high living room with roof framing exposed.



LIVING ROOM



SECOND FLOOR PLAN



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STRUCTURAL ENGINEERS DEPLORE FEE CUTTING

A BULLETIN just issued by the Structural Engineers' Society of New York deploring price cutting on professional service and making a plea for better relations between architects and engineers, throws some light on conditions in the eastern metropolis, where a sharp controversy is now waging between these two professional elements of the building industry. The conditions now apparently existing in New York had their parallel in Los Angeles about a decade ago, but they have gradually been ameliorated by advancing standards of architectural service and close checking of plans by the Los Angeles city building department. There are some thoughts in the bulletin of the Structural Engineers' Society, however, which may be timely, and they are printed herewith:

"Price cutters rarely make an honest profit and usually operate at a loss. Price cutters cannot render a reasonable service.

"Professional services of price cutters must necessarily give the client a false impression of what constitutes real high grade service. This applies to every professional element of the building industry — structural engineers, architects, heating and ventilating, sanitary, electrical and elevator engineers.

"Price cutting of professional charges is just another 'hangover' that afflicts the building industry. In the good old times, the architect was paid a small catch-as-catch-can fee. And he made up the deficit by a catch-as-catch-can game with contractors, material men and others.

"Of course, the architect's deficit was made up in part by 'free engineering' given by structural steel and iron contractors, steam fitters, plumbers, electricians and reinforced concrete contractors. In that way the architect acquired a rather derogatory opinion of bootleggers of 'free engineering' which still militates against the standing of the high-grade professional engineer. In turn, of course, the owner paid all the freight of the cut-rate architect.

"Building construction, by its inevitable development in economic importance, required better architectural service and men were technically trained for that profession, and likewise, men were technically trained equally well for all of the engineering professions. They became comparable to the so-called learned professions.

"It is freely admitted and as freely deplored that architect's fees are too low. Their deficits have to be offset by employing price-cutting engineers or using bootleg 'free engineering' furnished by contractors.

"Price cutting indicates an uneconomical condition of the building industry. No reasonable person disputes the right of employment with a reasonable profit. Every undesirable condition can be improved. The whole trouble lies in incorrect relations.

"A contributing factor to the present unsatisfactory position of the structural engineer is his placement as the architect's employee. As the owner's employee he can negotiate his own terms to a better advantage. Such a practice would not displace the intelligent and competent architect from his position as the co-ordinator of every engineering and contracting component of the project. Men can and do co-operate successfully on equal terms. It is admitted that no organized undertaking, such as a construction project, can succeed with divided authority and neither can supreme authority be successful unless correct relations among the staff members prevail—that is the crux of the whole matter.

"Recently a borough building commissioner addressed an architects' organization and stated that he favored making the architect responsible for the correct execution of his plans and specifications. The commissioner readily admitted the inability of his inspectors to properly inspect the details of construction in buildings during their erection. This should be done by the architect and he should be held responsible therefor.

"This practice would compel the owner to pay for architectural supervision and do away with the present practice which prevails to larger extent than we realize, of merely employing the architect to make and file plans and specifications. The owner can follow his own desires in skinning the job and erecting an improper building. It is like sending your linen to a wet wash laundry—some one else finishes the job.

"English law holds the architect and contractor jointly responsible for the correct execution of the plans and specifications—criminally and financially responsible for safe construction and durability of materials and workmanship. This is a check on irresponsibility.

"By the same token—why should not the structural engineer prepare and file his plans and specifications and be responsible for their proper execution? This would compel the owner to employ him to supervise the construction and certify to its correctness. It would prevent the substitution of lighter steel than designed—which now escapes the notice of the building inspectors.

"One sure way to prevent price cutting is to increase legal responsibility to include supervision of work. The client cannot get away with part service, the structural engineer's prestige is increased—a wheel cannot turn without his assistance and let some one pay the proper price.

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TRADE NOTES

"THE DECORATIVE TILES OF NORTH AFRICA"—For the preparation of this Monograph, Professor Newcomb has gone to the source of Moorish tile art which later was to culminate so wonderfully in the architecture of Spain. The Moslems have provided us with a source of inspiration in the decorative use of tile, and whether or not we are interested in design of an oriental type, there is much we can learn that may be utilized in colorful modern architecture.

The subject of the next monograph will be "Spanish Tiles." Published by the Associated Tile Manufacturers, 420 Lexington Ave., New York, N. Y.

ASBESTOS WALL TILE—The Johns-Manville Corporation has announced that still another new product, asbestos wall tile, which is now perfected after more than two years of research and exhaustive tests, has been released for nation-wide distribution through its present building material channels. This latest addition to the rapidly growing line of Johns-Manville building materials enables the home owner to have a bathroom, kitchen, laundry or breakfast nook lined with a colorful and sanitary wainscoting that combines beauty with economy.

Formed of asbestos fibres and Portland cement united under great pressure into large sheets and grooved off in squares to give the effect of individual units, Johns-Manville asbestos wall tile is durable, waterproof and fireproof. The wide range of attractive color combinations in both the tile sheets and the base and cap moulding is made possible by the use of special lacquer enamels. These beautiful lacquer finishes are the result of thorough laboratory and service tests, and represent the latest developments in this field. An important feature of the new product, and a great factor in making it such an economical building material, is its ease of application. The large sheets reduce installation costs, can be cut readily with a hand saw and are erected without recourse to cement. This simple, unique method of erection is accomplished by means of brass retention clips which hold the sheets in place. Brass strips lacquered to match the tile, lock into the clips, effectively concealing the joints.

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H. B. Stearns states that this consolidation of the resources and experience of two veteran and allied organizations will result in a wall bed of greater merit and value to the building industry. The rigid standard of construction and the patented features of Rome bedsprings will now be combined with the perfected mechanical features developed during the twenty-six years they have been manufacturing wall beds.

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CHAPTER OPPOSITION IGNORED

Bids for the construction of four roof wards to occupy the tops of the four main pavilions of the San Francisco Hospital, will be asked for, according to the Board of Public Works. Charles H. Sawyer of the City Architectural Bureau is preparing the plans and specifications.

Decision to construct the roof wards was made by the Board of Health despite protests by the Northern California Chapter, A. I. A., that the additions would mar the architectural beauty of the buildings.

Alfred Kuhn, who was associated with the late Newton J. Tharpe, city architect and designer of the hospital group, asked the Board of Health to refer the matter to the Northern California Chapter, and in a reply James H. Mitchell, secretary said:

"The matter of the addition of roof wards to the City and County Hospital buildings has again been considered, and it is the opinion of the chapter, that an addition which would satisfy these requirements would detract from the appearance of the hospital as it now stands."

When final action was taken, the Board of Health voted 6 to 1 to go ahead with the roof ward plan. Arthur H. Barendt casting the single negative vote.

Mr. Kuhn contends in addition to ruining the appearance of the hospital, the space thus added will provide for but 120 additional beds, the roofs are not constructed to carry the additional weight, and they will be expensive to operate.

HAROLD STONER BUSY

Harold Stoner has opened attractive offices for the practice of architecture at 1481 Burlingame Avenue, Burlingame. Mr. Stoner recently completed plans for a $75,000 lodge building for the Foresters of America. It will be built in the Mission District, San Francisco. Mr. Stoner has also been turning out plans for several large homes, one a $20,000 residence in Forest Hill for W. E. Schappe.

GRANTED CERTIFICATES TO PRACTICE

At the meeting of the State Board of Architectural Examiners, Northern District, on March 25th, 1930, the following were granted Provisional Certificates to practice architecture in this State: Kenneth E. Fratis, 1732 Webster Street, Oakland; Charles G. Lundgren, 872 Clayton Street, San Francisco; Doyt Early, 1421-26th Street, Sacramento.

MUST BE CERTIFIED

The Los Angeles Building and Safety Commission states that the blank for the architect's name on applications for building permits cannot be filled in unless the name used is that of a certified architect or licensed engineer under the state act. This statement appears in red ink on the application blanks being used by the building department.

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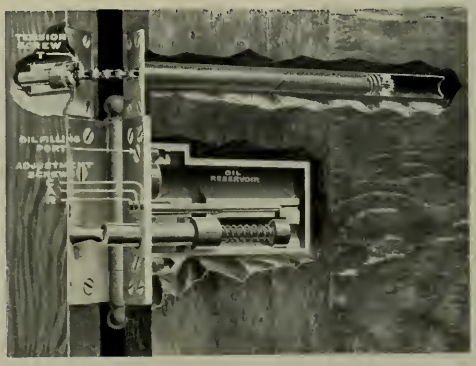

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San Francisco, Calif.

There's no profit in useless maintenance

After a panelboard is installed and working properly, every one wants to and should forget it.

This can be done with (FA) Panelboards. Original cost, which is no higher than other makes, can be divided by the years of a lifetime of service without maintenance if your choice is (FA). They are permanently safe, entirely standardized and practically wear proof.

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Reputation is contagious—use (FA) Panelboards for a better job and as a sign of quality throughout the wiring.

The (FA) Sales organization is experienced and willing to co-operate on wiring plans and panelboard and switchboard problems. Send for the (FA) Catalog now, a real handbook, free.

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Tulsa, Okla.
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Winnipeg, Man.

OREGON CHAPTER, A. I. A.

The following members were present at the March 18 luncheon of Oregon Chapter: Messrs. Johnson, Herzog, Logan, Jones, Bean, Forrest, Doty, Francis Jacobberger, Hemenway, Church, Newbeury, Roehr, Hinson, Stanton, Tucker, Crowell, Johnston and Aandahl.

Mr. Stanton, chairman of the Entertainment Commitee, introduced the four new Chapter Associates: Francis Jacobberger, Dell F. Hinson, Linn A. Forrest and Frank Roehr, and welcomed them on behalf of the Chapter, adding that before becoming full fledged members he would like to ask them some questions which he trusted would be answered with the utmost frankness. All the new members showed by their repartee that they were at least good timber for future entertainment committees.

The secretary announced that he had received a copy of the law regulating the practice of architecture in the state of New York and that the report that New York had enacted a law making it necessary to have the stamp of a licensed architect on drawings for any structure costing more than $10,000 was correct. The committee on Legislation was instructed to make plans for a campaign to obtain a similar law for Oregon.

As mentioned in former minutes the Chapter has been active in trying to strengthen the position of the Portland Art Commission. From the city hall we can forward the encouraging news that the authorities have gone on record pledging themselves to abide by the decisions of the Art Commission. This is all they can do as they have no authority to delegate certain powers to this or any other commission.

Oregon Chapter Handicap Golf Tournament

All would-be golfers and others are requested to enter.

Prizes for the four luckiest players.

All matches to be on handicap basis, match play (by holes).

Play any course mutually agreed upon by opponents.

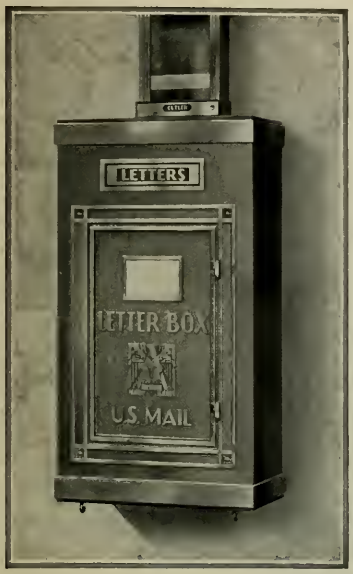
Handicap based upon three best 18 hole rounds during the last eight months or upon club handicap where member of club.

Consideration will be given to course upon which scores or handicaps were made determining handicaps for this tournament.

Send your three best scores or club handicap, together with name of course played to O. R. Bean, 925 Failing Building.

Spring is here!

Fred Aandahl, Secretary.



No. 4038

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Designed in its perfected form as the result of long experience to meet the requirements of public use under Post Office Regulation. Simple and substantial in form and construction. Harmonizes with the new motif in modernistic architectural composition.

A most interesting selection of stock Mail Boxes in conformity with the Art Moderne and executed in benedict nickel or other current media are now offered as constituent features of any equipment.

A pleasure to furnish information promptly upon request.

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"FOUR FIFTY SUTTER", San Francisco, has been completed and occupied. . . It is the best equipped building of its kind. . . Every suite is specially designed and finished to suit the doctor or dentist who occupies it. . . No two are alike. . . Textures of all kinds, plastic, canvas, stippled, glazed . . . lacquer enamels . . . hardwood finishes . . . furnishings . . . equipments . . . everything is the latest and the best. J. R. Miller and T. L. Pflueger, Architects. . . Lindgren and Swinerton, Inc., Builders. . . Lacquering, painting and decorating by A. Quandt & Sons, Painters and Decorators [since 1885] 374 Guerrero Street, San Francisco.

QUANDT QUALITY

"LE DERNIER CRI" IN PROFESSIONAL HOUSING

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts quoted are figuring prices and are made up from average quotations furnished by material houses to three leading contracting firms of San Francisco.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

Overtime in wage scale should be credited with time and a half, Sunday and holidays double.

Bond—1½% amount of contract.

Brickwork—
Common, $32 to $38 per 1000 laid, (according to class of work).
Face, $90 to $115 per 1000 laid, (according to class of work).
Brick Steps, using pressed brick, $1.10 lin. ft.
Brick Walls, using pressed brick on edge, 75c sq. ft. (Foundations extra.)
Brick Veneer on frame buildings, $ .90 sq. ft.
Common, f.o.b. cars, $14.50 plus cartage.
Face, f.o.b. cars, $55.00 per 1000, carload lots.

HOLLOW TILE FIREPROOFING (f.o.b. cars in carload lots).

3x12x12 in.	$ 96.00 per M
4x12x12 in.	108.00 per M
6x12x12 in.	156.00 per M
8x12x12 in.	255.00 per M

HOLLOW BUILDING TILE (f.o.b. cars in carload lots).

8x12x5½	$108.00
6x12x5½	74.00

Composition Floors — 18c to 30c per sq. ft. In large quantities, 18c per sq. ft. laid.
Rubber Tile—65c per sq. ft.

Terazzo Floors—50c to 60c per sq. ft.
Terazzo Steps—$1.50 per lin. ft.
Mosaic Floors—80c per sq. ft.

Concrete Work (material at San Francisco bunkers) — Quotations below 2000 lbs. to the ton.

No. 3 rock, at bunkers	$1.40 per ton
No. 4 rock, at bunkers	1.40 per ton
Eliott pea gravel, at bnkrs.	1.40 per ton
Washed gravel, at bnkrs.	1.40 per ton
Eliott top gravel, at bnkrs.	1.40 per ton
City gravel, at bunkers	1.40 per ton
River sand, at bunkers	1.00 per ton
Delivered bank sand	1.00 cu. yd.

Note—Above prices are subject to discount of 10c per ton on invoices paid on or before the 15th of month, following delivery.

SAND
Del Monte, $1.75 to $3.00 per ton.
Fan Shell Beach (car lots, f.o.b. Lake Majella), $2.75 to $4.00 per ton.
Cement, $2.44 per bbl. in paper sks.
Cement (f.o.b. Job, S. F.) $2.64 per bbl.
Cement (f.o.b. Job, Oak.), $2.64 per bbl.
Rebate of 10 cents bbl. cash in 15 days.
Atlas "White" .....$ 8.50 per bbl.
Forms, Labors average 22.00 per M.
Average cost of concrete in place, exclusive of forms, 28c per cu. ft.
4-inch concrete basement floor.....13c to 14c per sq. ft.
4½-inch concrete basement floor.....14c to 15c per sq. ft.
2-inch rat-proofing....6½c per sq. ft.
Concrete Steps.....$1.26 per lin. ft.

Dampproofing—
Two-coat work, 20c per yard.
Membrane waterproofing—4 layers of saturated felt, $5.50 per square.
Hot coating work, $2.00 per square.

Electric Wiring — $3.00 to $9.00 per outlet for conduit work (including switches).
Knob and tube average $2.25 to $5.00 per outlet, including switches.

Elevators—
Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2600; direct automatic, about $2500.

Excavation—
Sand, 70 cents; clay or shale, $1.25 per yard.
Teams, $10.00 per day.
Trucks, $21 to $27.50 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—
Ten-foot balcony, with stairs, $65.00 per balcony.

Glass (consult with manufacturers)—
Double strength window glass, 15c per square foot.
Quartz Lite, 50c per square foot.
Plate 80c per square foot.
Art, $1.00 up per square foot.
Wire (for skylights), 27c per square foot.
Obscure glass, 25c per square foot.
Note—Add extra for setting.

Heating—
Average, $1.80 per sq. ft. of radiation, according to conditions.

Iron—Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg.site)
Common, $23.00 per M (average).
Common O. P. select, average, $33.00 per M.

1 x 6 No. 3—Form lumber	$20.00 per M
1 x 4 No. 1 flooring	42.00 per M
1 x 4 No. 2 flooring	40.50 per M
1 x 4 No. 3 flooring	35.00 per M
1 x 6 No. 2 and better flooring	41.00 per M
1¼ x 4 and 6 No. 2 flooring	50.00 per M

Slash grain—

1 x 4 No. 2 flooring	$35.00 per M
1 x 4 No. 3 flooring	33.00 per M
No. 1 common run to T. & G.	30.00 per M
Lath	4.50 per M

Shingles (add cartage to prices quoted)—

Redwood, No. 1	$ .90 per bdle.
Redwood, No. 2	.75 per bdle.
Red Cedar	.90 per bdle.

Hardwood Flooring (delivered to building)—

13-16x3¼" T & G Maple	$135.00 M ft.		
1 1-16x2¼" T & G Maple	145.50 M ft.		
⅞x3½ sq. edge Maple	132.50 M ft.		
	13-16x2¼" T&G	⅜x2" T&G	5-16x2" Sq. Ed.
Clr. Qtd. Oak	$220.00 M	$160.00 M	$178 M
Sel. Qtd. Oak	150.00 M	122.00 M	131 M
Clr. Pla. Oak	155.00 M	110.00 M	113 M
Sel. Pla. Oak	132.00 M	79.00 M	97 M
Clear Maple	147.00 M	101.00 M	
Laying & Finishing	16c ft.	15c ft.	13c ft.

Wage—Floor layers, $9.00 per day.

Building Paper—

1 ply per 1000 ft. roll	$4.00
2 ply per 1000 ft. roll	6.00
3 ply per 1000 ft. roll	9.25
Sash cord com. No. 7	$ 1.05 per 100 ft.
Sash cord com. No. 8	1.20 per 100 ft.
Sash cord spot No. 7	1.75 per 100 ft.
Sash cord spot No. 8	1.10 per 100 ft.
Sash weights cast iron	67.00 toa

Nails, $3.25 base.
Belgian nails, $3.00 base.

Millwork—
O. P. $80.00 per 1000. R. W., $85.00 per 1000 (delivered).
Double hung box window frames, average, with trim, $6.00 and up, each.
Doors, including trim (single panel, 1¾ in. Ore. pine) $6.75 and up, each.
Doors, including trim (five panel, 1¾ in. Oregon pine) $6.00 each.
Screen doors, $3.50 each.
Patent screen windows, 20c a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., $5.50 each.
Dining room cases, $6.50 per lineal foot.
Labor—Rough carpentry, warehouse heavy framing (average), $11.00 per M.
For smaller work, average, $22 to $30 per 1000.

Marble—(Not set), add 50c to 65c per ft. for setting.

Alaska	$1.40 sq. ft.
Columbia	1.40 sq. ft.
Golden Vein Yule Colo	1.70 sq. ft.
Pink Lepanto	1.50 sq. ft.
Italian	1.75 sq. ft.

Tennessee ..... 1.70 sq. ft.
Verde Antique ..... 3.00 sq. ft.

NOTE—Above quotations are for ⅞ inch wainscot in large slabs f.o.b. factory. Prices on all other classes of work should be obtained from the manufacturers.

Floor Tile—Set in place.

Verde Antique .....$2.50 sq. ft.
Tennessee ..... 1.50 sq. ft.
Alaska ..... 1.35 sq. ft.
Columbia ..... 1.45 sq. ft.
Yule Colorado ..... 1.45 sq. ft.
Travertine ..... 1.60 sq. ft.

Painting—

Two-coat work .....30c per yard
Three-coat work .....40c per yard
Whitewashing ..... 4c per yard
Cold Water Painting ..... 8c per yard
Turpentine, 90c per gal. in cans and 75c per gal. in drums.
Raw Linseed Oil—$1.36 gal. in bbls.
Boiled Linseed Oil—$1.39 gal. in bbls.

Carter or Dutch Boy White Lead in Oil (in steel kegs)

	Per. Lb.
1 ton lots, 100 lbs. net weight	12¾c
500 lb. and less than 1 ton lots	12½c.
Less than 500 lb. lots	12c

Dutch Boy Dry Red Lead and Litharge (in steel kegs)

1 ton lots, 100 lb. kegs, net wt. 12¾c
500 lb. and less than 1 ton lots 12½c
Less than 500 lb. lots.....13c

Red Lead in Oil (in steel kegs)

1 ton lots, 100 lbs. net weight 13¾c
500 lb. and less than 1 ton lots....14c
Less than 500 lb. lots.....14¼c

Note—Accessibility and conditions cause wide variance of costs.

Patent Chimneys—

6-inch.....$1.00 lineal foot
8-inch..... 1.50 lineal foot
10-inch..... 1.85 lineal foot
12-inch..... 2.10 lineal foot

Pipe Casings — 14" long (average), $5.00 each.

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.40
2 coats, lime mortar hard finish, wood lath	.52
2 coats, hard wall plaster, wood lath	.55
3 coats, metal lath and plaster	1.00
Keene cement on metal lath	1.25
Ceilings with ¾ hot roll channels metal lath	.67
Ceilings with ¾ hot roll channels metal lath plastered	1.40
Shingle partition ¾ channel lath 1 side	.62
Single partition ¾ channel lath 2 sides 2 inches thick	2.20
4-inch double partition ¾ channel lath 2 sides	1.30
4-inch double partition ¾ channel lath 2 sides plastered	2.45

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
2 coats Atlas cement, brick or concrete wall	1.25
3 coats cement finish No. 18 gauge wire mesh	1.76
3 coats Atlas finish No. 18 gauge wire mesh	2.05

Wood lath, $4.50 per 1000.
2.5-lb. metal lath (dipped) ..... .19
2.5-lb. metal lath (galvanized) ..... .22
3.4-lb. metal lath (dipped) ..... .24
3.4-lb. metal lath (galvanized) ..... .29
¾-inch hot roll channels, $45 per ton.
Hardwall plaster, $15.40 ton; $12.95 in paper sacks (rebate 15c sack).
Finish plaster, $16.40 ton; in paper sacks, $13.85 (rebate 10c sack).
Dealer's commission, $1.00 off above quotations.
Hydrate Lime, $19.50 ton.
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $43.00 per M.

Composition Stucco—$1.60 to 2.00 per sq. yard (applied).

Plumbing—

From $60.00 per fixture up, according to grade, quantity and runs.

Roofing—

"Standard" tar and gravel, $5.25 per square for 30 squares or over.
Less than 30 squares, $5.50 per sq.
Tile, $19.00 to $35.00 per square.
Redwood Shingles, $11.00 per square in place.
Cedar Shingles, $10.50 sq. in place.
Recoat, with Gravel, $3.00 per sq.

Sheet Metal—

Windows—Metal, $1.80 a sq. foot.
Fire doors (average), including hardware, $2.00 per sq. ft. (not

Skylights—

Copper, $1.35 sq. ft. (not glazed).
Galvanized iron, 28c sq. ft. (not glazed).

Stone—

Granite, average, $5.50 sq. foot in place.
Sandstone, average Blue, $3.50; Boise, $2.60 sq. ft. in place.
Indiana Limestone, $2.60 per sq. ft. in place.

Store Fronts—

Copper sash bars for store fronts, corner, center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Steel Structural—$85.00 per ton erected). This quotation is an average for comparatively small quantities
Light truss work higher; plain beam and column work in large quantities, less.
Cost of steel for average building (erected), $82.00 per ton.

1930 WAGE SCHEDULE FOR SAN FRANCISCO BUILDING TRADES

FIXED BY S. F. BUILDERS EXCHANGE

Craft	Journeymen Mechanics
Asbestos workers	$ 8.00
Bricklayers	11.00
Bricklayers' hodcarriers	7.00
Cabinet workers, (shop)	7.50
Cabinet workers, (outside)	9.00
Carpenters	9.00
Cement finishers	9.00
Electric workers	9.00
Electrical fixture hangers	8.00
Elevator constructors	10.00
Elevator helpers	7.00
Engineers, portable and hoisting	9.00
Glass workers	8.50
Hardwood floormen	9.00
Housemovers	8.00
Housesmiths, arch. iron, skilled all branches	9.00
Housesmiths, arch. iron, not skilled all branches	8.00
Housesmiths, reinforced concrete, or rodmen	9.00
Iron workers (bridge & structural) including engineers	11.00
Laborers, building (5-day week)	5.50
Lathers, channel iron	10.00
*Lathers, all other	8.50
Marble setters	10.00
Marble helpers	6.00
Marble cutters and copers	8.00
Marble bed rubbers	7.50
Marble polishers and finishers	7.00
Millmen, planing mill department	7.00
Millmen, sash and door	6.00
Millwrights	8.00
Model makers	10.00
Model casters	9.00
Mosaic and Terrazzo workers	9.00
Mosaic and Terrazzo helpers	6.00
Painters	9.00
Painters, varnishers and polishers (shop)	7.50
Painters, varnishers and polishers (outside)	9.00
Pile drivers and wharf builders	9.00
Pile drivers engineers	10.00
Plasterers	11.00
Plasterers' hodcarriers	7.50
Plumbers	10.00
Roofers, compnsition	8.00
Roofers, all others	8.00
Sheet metal workers	9.00
Sprinkler fitters	10.00
Steam fitters	10.00
Stair builders	9.00
Stone cutters, soft and granite	8.50
Stone setters, soft and granite	9.00
Stone carvers	8.50
Stone derrickmen	9.00
Tile setters	10.00
Tile helpers	6.00
Auto truck drivers, less than 2500 lbs.	5.50
Auto truck drivers, 2500 to 4500 lbs.	6.00
Auto truck drivers, 4500 to 6500 lbs.	6.50
Auto truck drivers, 6500 lbs. and over	7.00
General teamsters, 1 horse	5.50
General teamsters, 2 horses	6.00
General teamsters, 4 horses	6.50
Plow teamsters, 4 horses	6.50
Scraper teamsters, 2 horses	6.00
Scraper teamsters, 4 horses	6.00

*On wood lath if piece rates are paid they shall be not less than such an amount as will guarantee, on an average day's production of 1500 lath, the day wage set forth.

Eight hours shall constitute a day's work for all Crafts except as otherwise noted.

Plasterer's hodcarriers, bricklayers' hodcarriers, roofers, laborers, and engineers, portable and hoisting, shall start 15 minutes before other workmen, both at morning and noon.

Five days, consisting of eight hours on Monday to Friday inclusive, commencing January 31, 1930, shall constitute a week's work.

Overtime shall be paid as follows: For the first four hours after the first eight hours, time and one-half. All time thereafter shall be paid double time. Saturday (except laborers), Sundays from 12 midnight Friday, and Holidays from 12 midnight of the preceding day shall be paid double time. On Saturday laborers, building, shall be paid straight time.

Where two shifts are worked in any twenty-four hours shift time shall be straight time. Where three shifts are worked, eight hours pay shall be paid for seven hours on the second and third shifts.

All work shall regularly be performed between the hours of 8 A. M. and 5 P. M., provided, that in emergencies or where premises cannot be vacated for work by mechanics until the close of business, men then reporting for work shall work at straight time; but any work performed after midnight shall be paid time and one-half except on Saturdays, Sundays, and holidays, when double time shall be paid.

Recognized holidays to be New Year's Day, Decoration Day, Fourth of July, Labor Day, Admission Day, Thanksgiving Day and Christmas Day.

Men ordered to report for work, for whom no employment is provided, shall be entitled to two hours pay.

ARCHITECTS' BUILDING

Fifth and Figueroa Streets, Los Angeles

DIRECTORY OF ARCHITECTS AND ALLIED INTERESTS

	Room
THE ARCHITECT AND ENGINEER (R. D. Bunn, Representative)	410
ADAMS, Charles G.	1016
BASHFORD, Katherine	710
BUILDING MATERIAL EXHIBIT	First & Mezz.
COATE, Roland E.	701
DeAHNA, Manfred	806
DODD & RICHARDS	606
EAGER, W. W.	505
HEAD, Chalfant	806
HUTCHASON, Arthur	1102
JOHNSON, Reginald D.	707
KELLEY, H. Roy	1102
KISTNER, Theodore C.	814
LOCKWOOD, Robert	512
L. A. ARCHITECTURAL CLUB	205
MARSH, Norman F.	516
MARSTON & MAYBURY	403
MITTRY, George	501
MOODY, Walter L.	312
MURRAY, Robert Dennis	502
NEWTON, H. C.	502
NOMLAND, Kemper	615
PARKER, Llewellyn A.	804
PHILLIPS, Ralph E.	603
POWELL, Herbert J.	516
RICHARD, William	607
SEDGLEY, Arlos R.	816
SIMPSON CONT. COMPANY	1007
SMITH, D. D.	516
SMITH, Glen Elwood	1210
STANTON, REED & HIBBARD	1107
STAUNTON, Wm. S. Jr.	806
WATSON, L. F.	903
WHARTON, Heth	802
WINSLOW, C. M.	1001
WITMER, David J.	903
WOOLLETT, Wm. Lee	802

WASHINGTON STATE CHAPTER

The regular monthly Chapter meeting for March was held at the College Club, Seattle, March 6, with a good attendance in honor of the newly elected officers. After the customary get-together and dinner the meeting was called to order by President Borhek, the minutes of the last meeting, being the annual meeting, were read and approved, followed by the usual report of the treasurer which was likewise approved.

The secretary reported on the formation of the "Washington State Council for Roadside Beauty," which led to the adoption of the following resolution presented by Mr. Harlan Thomas:

"Whereas, the Washington State Council for Roadside Beauty has been organized for the purposes expressed in the name of the organization, and

"Whereas, the purposes of this organization are such as appeal to the Chapter, and

"Whereas, the above organization has requested that the Chapter appoint a member of the Chapter to serve as a member of the organization,

"Therefore, be it Resolved, that the American Institute of Architects, Washington State Chapter, commend this movement and that the President be authorized to appoint a member of the Chapter to co-operate with this organization."

To comply with the intent of this resolution, Secretary Lance E. Gowen was appointed by the President to represent the Chapter.

E. S. Goodwin, president of the Seattle City Planning Commission, having been regularly nominated for Honorary Associate Membership in the Chapter on the recommendation of the City Planning Committee, was unanimously elected.

The president proceeded to announce appointments on some Chapter committees and continued by giving what he termed an inaugural address. In this, he mentioned first the replies to his questionnaire sent to all Chapter members, these indicating a desire to feature at the Chapter meetings practical questions having to do with the business side of architecture. This business side of architecture President Borhek said was coming to the front as a vital issue. He spoke of the operation of the Chapter's tax on commissions as not indicating extensive lucrative practice on the part of the members of the Chapter. While making money was not a gauge of architectural ability, we must give attention to the business aspect of the profession.

The way being now clear for the entertainment feature of the program the meeting was turned over to Mr. Torbitt, Chairman of the Program Committee, who announced the topic for discussion "Modern Architecture," which he thought might partake of the nature of the dog fight suggested in the president's circular letter.

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San Francisco

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New York City

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"Hazacode Wire"

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Wm. Taylor Hotel

Lewis P. Hobart, *Architect* Cahill Bros., *Builders*
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Manufactured by

RICHMOND PRESSED BRICK COMPANY
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625 Market Street San Francisco, California

Professor Herrman opened the discussion with an effective presentation in support of the modernistic trend. Mr. Herrman said that a change in dress was easy, but the spirit of architecture was another matter. Modern architecture brought about a contrast between the traditional and the radical. The modernistic, as with all other architecture, must continue to be inspired by what has gone before. The nature of the material was all-important and there should be a freedom from too close adherence to traditional types. With this modern freedom of expression, Professor Herrman believed we were on the verge of a new renaissance.

Mr. Vogel condemned the modernistic trend, maintaining that we should do what we are accustomed to do instead of flying off on a tangent. He believed that architecture should be continually based on tradition. An interesting discussion followed. Mr. Gowen believed that modern architecture was based on fundamental laws and was in the nature of a protest against stereotyped tradition. Mr. Huntington spoke of the "Art Nouveau," which was a former expression of modernism. He believed that the new architecture had a function; that we were inclined to be too much bound in our habits of thinking.

Professor Herrman added that architecture should be the logical expression of the age.

ALTITUDIMANIA

A new disease, most fatal to architecture, diagnosed as altitudimania, has broken out in New York. There seems to be no cure except financial limitations, antiego serum or death. The race is to the last, so far. The parvenu auto maker succeeds in having the ball on top of his flagpole higher than that of the moneymad banker's in Wall Street. And now comes the mucker, false-alarm politician, who also ran, proposing to erect a tall steel mooring mast for airships on top of his eighty or more story building. He would have the highest flagpole ball of all. The Phoebe Moron Foundation commends the kindness of this politician for constructing such a fine roosting place for pigeons.

This disease of altitudimania, is the cheapest (not in money), most shoddy phase of American asininity—and that is saying something. The power of money in the hands of egotistical, uncultured owners is the most devastating to the ideals of good architecture. Before this element of society attains sufficient culture to have conception of architectural decency, the city will become the laughing stock of the civilized architectural world. There is one bright and shining hope—inevitable obsolescence will reclaim them to its own and demolition will follow. In the meantime the architect must prostitute himself to the psychosis indicated in altitudimania.

A. T. NORTH, in the *Passing Show*.

Port Orford Cedar is selected for tunnels of the Western Pacific. This photo shows portals and inside timbers in a tunnel on their line in San Francisco.

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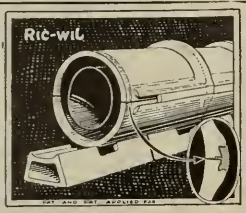

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VAGABOND TOUR OF 1930

The annual Vagabond Tour sponsored by the School of Architecture, University of Southern California, will start June 8 in Los Angeles and end August 17 in New York. This tour is open not only to architectural students but to architects and draftsmen as well. It will be similar to the Vagabond Tour of 1929 except for an enlargement of the itinerary to include Spain, the German Rhine country and Holland. Emphasis will be placed, this year, upon a study of modern movements and their relation to traditions of the past, combining the regular study of historic monuments with a survey of trends in American work as compared with those of European countries.

The following information and comment is taken from the announcement of the Tour issued by the University of Southern California:

"The western world is now seething with an effort to express more fittingly in its architecture the results of modern civilization and new building processes. There never was a time when a tour held such possibilities of educational value to the student of architecture.

"Visits will be made to the great architectural schools of the world, including the New York B. A. I. D., the Paris Beaux-Arts, the Fontainebleau Summer School, the American Academy in Rome, and the Association School of Architecture in London. There will be an opportunity to meet some of the famous teachers and to see the work of the students.

"This is a men's tour, limited to architects and students of architecture and the allied arts. It is strictly non-commercial and non-profit making. While every effort has been made to organize and arrange the tour to cover those sections of greatest architectural interest, ample opportunity for variations to meet individual preferences will be given along the way. Instead of the rigid commercial tour, it is merely a group of men banded together for the purpose of congenial company, the saving of much individual effort and money, and the assurance of profiting to the fullest extent from the adventure.

"Due to the increase in length of the tour and the raise in steamship rates as well as to the elimination of every vagabond feature which proved objectionable or too strenuous last summer, the price has been raised. It now includes a Pullman berth across the continent and second class railroad passage in Europe wherever it is necessary for comfort. Every effort will be made to arrange additional itineraries on the tour basis for those who desire to remain longer in Europe. It is hoped, however, that the group may be kept together for the return trip.

"The tour will be under the personal direction of Dean A. C. Weatherhead of the School of Architecture, assisted by Professor C. R. Johnson."

The itinerary will be as follows:

June 8—Leave Los Angeles on the Southern Pacific "Apache."

June 9—Stop over at El Paso, Texas. Visit to Juarez, Mexico.

June 11—Stop over at New Orleans. The old French District.

June 13—New York City. Baltimore & Ohio Railroad via Washington.

June 14—Sail on S. S. New Amsterdam, Holland American Line.

June 23—Arrive at Boulogne, France. Train to Amiens.

June 24—Amiens. Motor to Baurais and Rouen.

June 25—Rouen. Motor to Chartres and Paris.

June 26 to 30—Paris. Versailles. Motor to Fontainebleau.

July 1—Enroute to Spain.

July 2-3—Burgos. Train to Madrid.

July 4-6—Madrid, Toledo, Escorial.

July 7—Enroute to Seville via Cordoba.

July 8—Seville. Train to Granada.

July 9-10—Granada. Return to Madrid.

July 11—Enroute to Barcelona.

July 12-13—Barcelona. Sail on the Villain & Fassio to Italy.

July 14—Genoa. Train to Rome.

July 15-21—Rome, Tivoli, Naples and Pompeii.

July 22-26—Florence, Fiesole, Pisa.

July 27—Enroute to Venice via Bologna.

July 28-29—Venice, Lida. Train to Milan.

July 30—Enroute to Germany. Switzerland via the St. Gotthard.

July 31—Heidelberg.

August 1—Mainz. Rhine steamer to Cologne.

August 2—Cologne. Train to Holand.

August 3—Amsterdam. The Hague.

August 4—Rotterdam. Sail to England.

August 5-8—London, Oxford or Cambridge, Lincoln.

August 9—Eail from Southampton on the S. E. Rotterdam.

August 17—Arrive at New York.

Return to Los Angeles over the Baltimore & Ohio Railroad via Washington and Chicago and the Southern Pacific. Stop overs to be arranged.

METAL LATH HANDBOOK

Genfire Steel Company has just published a new metal lath handbook. The book is more than a catalog. It is a manual containing information and data concerning the many uses of metal lath and its accessories.

Considerable space has been given to the processes of metal lath construction. The methods of the many forms of this type of construction have been given in complete details. This book is likely to be of material help to the contractor in his work and to the architect in his design.

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CONTRACTORS ON STATE BUILDINGS PRAISED FOR EFFICIENCY

By C. Pierson

Specification Writer, Division of Architecture, State Department of Public Works, in Southwest Builder and Contractor

THE purpose of this article is to dwell on the relation between contractors and the Division of Architecture with regard to state buildings.

The question often arises, "Who built the building?" The answer is seldom correct and varies as frequently as it is asked, depending wholly upon the viewpoint of the individual questioned. More often than otherwise, were the question to be asked of the contractor, the answer would be, "Yes, I built the building." This same answer might emanate from the owner, the architect, the engineer, the designer, the superintendent, and all and sundry having aught to do with its construction. Nevertheless and without attempting to combat anybody's preconceived ideas on the subject, the statement is made that the contractor plays a most important part in the construction of a building. It is he who must organize the force, provide the materials and equipment, lay out the plan of procedure and take full responsibility for the faithful execution of plans and specifications.

There was a current impression at one time that public work was a thing to be avoided by contractors; that contractors who once undertook a public work contract on competitive bidding would probably lose money, or at least fail to make a profit. The demand for plans for most projects was not great and those contractors who succeeded in obtaining contracts seldom came back to figure other public work. Suffice it to say that no such condition exists at the present time, for we find the same contractors competing time after time together with more and more new contractors, and it not infrequently happens that the same contractor is successful on a number of separate projects.

The relations between the Division of Architecture and contractors who have undertaken to perform public work under the direction of the division have, as a whole, been very satisfactory and a credit to the state and contractors alike. So satisfactory has been the relation that the state has profited to a large extent by reason of low bids on its building program over a period of several years.

In analyzing the situation, several outstanding reasons may be pointed out as at least tending toward making this condition possible. First, and we might say foremost, when a job is advertised for bids, the set of plans which goes into the hands of contractors is as complete as it is possible to make. An earnest and conscientious effort is made to show every item in detail and to leave as little as possible to guesswork on the part of the contractor. Numerous full-size details

accompany each set, and clear, concise scale details are shown for parts that may not be full size details for all particular work. With such a set of details before him, the contractor knows in advance what is expected and can figure his cost without fear of having a more elaborate detail forced on him later.

Specifications accompany all plans and are intended to explain in detail the kinds of materials required, methods of construction, types of finishes, and many other details and items that cannot usually be shown on plans.

Specifications are drawn with care and with an effort to explain fully what is required. To a large extent, "cover all" and ambiguous clauses, aimed to force the contractor to perform unforeseen work which might be required, but which is neither shown nor specified, have been eliminated.

Clear, concise specifications written in understandable English unquestionably tend to reduce the cost of construction. Lengthy and wordy specifications are often not read completely, and ambiguous specifications tend to increase costs simply by reason of the law of self-protection.

The above statements are not made to give the impression that our plans and specifications are always faultless. Errors creep in occasionally in spite of our best efforts, but on the average the state's plans are as complete and more so than most.

When changes are made, requiring extra work, the extra work is paid for. Changes in plans and specifications are necessary at times after a contract has been let due to developed conditions, no matter how carefully they have been drawn. Such changes are cared for by change order, and when extra work of this nature is given to a contractor he is allowed his cost plus a reasonable amount for overhead and profit.

In the field and in the office every possible assistance is rendered the contractor and the results of such co-operation have been very gratifying. As a general result, there has been a growing demand for state plans, and the interest displayed when work is advertised for bids warrants the belief that contractors are losing their antipathy toward figuring public work. There has always been a certain demand from big centers, but of late requests are coming from the more remote quarters. With such widespread interest, the competition has been increased and closer estimates have resulted.

With such keen competition, the assumption might readily be made that some contractors are performing work at a loss. Were it not for the fact that the same contractors compete time and again, this might be considered a fair assumption, but it is hard to conceive of a contractor standing a loss more than once; therefore, it is to be concluded that state contracts are remunerative in spite of competition and low prices.

[To be Concluded in May Issue]

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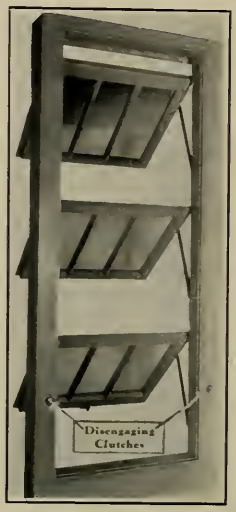

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INDUSTRIES' CREDIT BUREAU

As a result of an investigation by a special committee appointed by the San Francisco Association of Credit Men, that city is to have a Construction Industries' Credit Bureau to operate as a unit of the association.

The committee held numerous meetings and went thoroughly into the problem and found an urgent need for credit co-operation in the fields investigated.

The purposes for which the bureau was created are:

To protect and encourage the construction industries of San Francisco in relation to all matters of credit.

To establish and maintain uniformity in commercial usages, insofar as they relate to questions of credit.

To establish and maintain sound credit practices throughout the industry.

To avoid and adjust controversies or misunderstandings between members and others.

To foster allied group credit meetings and to solicit, compile, record and disseminate among its members information respecting the financial credit standing and responsibility of corporations, firms and individuals engaged in any commercial, industrial or financial enterprise.

The bureau will be divided into different departments or divisions. The following general divisions will be immediately established:

(a) Financial.
(b) Manufacturing and producing.
(c) Distribution.
(d) Contracting.

The general plan and set-up of the Construction Industries' Credit Bureau has been modeled after the approved plan of the National Association of Credit Men, which is now being operated by many associations affiliated with the national system. The major features of the service provided for will include credit interchange reports, construction reports and monthly credit period reports.

A manager for the bureau has been employed and the association anticipates that within the next 60 days the bureau will be in a position to give prompt and efficient service to those interested in the building construction fraternity.

HARDWOOD MEN MEET

C. M. Cooper of Los Angeles was re-elected president of the Pacific Coast Hardwood Floor Dealers' Association at the annual convention held in Del Monte. B. E. Bryan, Oakland, was elected vice-president and G. C. Gearhart, Los Angeles, secretary.

Directors elected were: E. E. Hill, Portland; Roger Sands, Seattle; H. W. Swafford, Los Angeles; C. H. White, San Francisco; J. E. Higgins, San Francisco; J. F. Connolly, Los Angeles; Jerry Sullivan, Jr., San Diego; George H. Brown, Oakland, and Bryan and Gearhart.

OPENS EASTERN OFFFICE

Gladding, McBean & Co., on April 1, opened New York offices in charge of Herbert Brown at present manager of the southwest district sales department of the company.

The primary reason for this move is the fact that an increasing number of construction projects on the Pacific Coast have their inception in the offices of Eastern architects, contractors and owners.

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LOS ANGELES BUILDING CODE

A new building code now being drafted for Los Angeles county will be the first of its kind in the United States, according to County Counsel Everett Mattoon. The new code which will apply to all unincorporated sections of the county will be the result of five years of preliminary work of the county architect, fire warden, health, planning and mechanical engineering departments.

Karl Muck, county architect, presented a tentative outline of the proposed code to the Board of Supervisors for preliminary approval as to the general plan, which will comprise three general ordinances, covering plumbing, electrical wiring and building, giving the county jurisdiction equivalent to the supervision now exercised by incorporated cities.

The classification of buildings will be similar to that in Los Angeles city, in accord with the county's pioneer zoning ordinance, enacted in 1927.

The new code is in line with the extension a week ago by the supervisors of county fire protection to all unincorporated districts, even if these lie without the lines of tax contributing fire protection districts.

TALL BUILDING RESTRICTIONS

Addressing the members of the Commonwealth Club, of San Francisco, on the subject of tall buildings, Carl J. Rhodin, chairman of the club's city planning section, announced that the section favored restriction of the height of buildings to twice the width of the street at the sidewalk line.

Where additional altitude is needed, Rhodin said, second, third and succeeding higher sections should go up like steps, narrowing toward the top.

Massed tall structures, Rhodin argued, interfered with the light, air and view of each other to their common detriment and consequent decrease of property values.

More expert criticism of the tall buildings was heard from Stephen Child, architect; C. H. Snyder, civil engineer and Ralph Robinson, traffic expert.

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The ARCHITECT AND ENGINEER

MAY
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DECORATIVE ARTS NUMBER

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Who's Who in this Issue

MORGAN, WALLS & CLEMENTS have been practicing architecture in Los Angeles under various firm names since 1870. The beginning dates from the office of E. F. Kysor, a pioneer architect of Los Angeles. In 1874 Octavius Morgan entered the office of Mr. Kysor. Mr. Morgan was born near Canterbury, England, in 1850, where he received his early education at the Kent House Academy and the Thomas Cross Classic School, and completed his studies at the Sydney Cooper Art School. In 1875 the firm became Kysor & Morgan. Subsequent to the retirement of Mr. Kysor in 1888 the firm became Morgan & Walls. Mr. Walls was born in Buffalo, New York. He was educated there and worked for several years in the office of H. H. Richardson. Mr. Walls came to Los Angeles in 1882. In 1910 Mr. Morgan's son, Octavius Weller Morgan, was admitted to the firm, which then became known as Morgan, Walls & Morgan. O. W. Morgan, who was born in Los Angeles in 1886, is a graduate of Stanford University, where he received his degree in engineering. He was admitted to the practice of architecture in 1910. Stiles Oliver Clements, who came to Los Angeles in 1911, was born in Maryland in 1883. He is a graduate of the Wilmington Conference Academy, at Wilmington, Delaware, the Drexel Institute, at Philadelphia, and he studied architecture under Despradelle at the Massachusetts Institute of Technology. Mr. Clements was admitted to the practice of architecture in 1916 and entered the office of Morgan, Walls & Morgan in 1922. In March, 1922, the elder Morgan died; Mr. Walls died in December, 1922, and in 1923 the firm was reorganized under the name of Morgan, Walls & Clements.

KEM WEBER, who, in collaboration with Albert F. Roller, architect, designed Sommer & Kaufmann's new San Francisco store, came over from Germany in 1914 to assist in the architectural work of the German section of the Panama-Pacific Exposition. Being unable to return to his native land, he opened a studio in San Francisco after the exposition work was finished. Later Mr. Weber moved to Berkeley, where he designed modern interiors and after the war, transferred his work to Santa Barbara. Three years later he became manager of the designing department of Barker Bros., Los Angeles. In 1924, Mr. Weber became an American citizen and since 1927 has headed his own business. Kem Weber's success dates back to the early training he received in Germany. The breadth of his understanding of the problems involved in his creative designing and the vigorous manner in which these designs have been executed are evidence of the thoroughness of this early training.

WALTER T. STEILBERG, architect, who gives his impressions of the Decorative Arts Show at the Woman's City Club, in this issue, is a native of Kentucky. He is a Californian in education, experience and sympathies, a graduate of the University of California and certificated to practice architecture since 1911. Mr. Steilberg has traveled abroad on several occasions. He received his office training with Hubbard and Gill, San Diego; Myron Hunt and Elmer Grey, Los Angeles; John Galen Howard and Julia Morgan, San Francisco. He has been practicing independently since 1921, his work being chiefly in domestic architecture and structural design for other members of the profession. His hobbies are photography, police dogs, Chinese art and the development of a new low cost method of constructing fire-proof buildings for light load occupancy.

SIMEON PELENC, whose article on sgraffito appears in this number, and who has contributed other articles on this subject to **The Architect and Engineer**, was born in France. He is a graduate of the University of Aix and a student of Fine Arts School in Marseilles and Decorative Arts School in Paris. In collaboration with Professor Eugene Grasset he decorated the Pavillon Bleu, one of the features of the Great Fair (Paris 1900); studied fresco painting from his childhood under Angelo de Signori of Verona and executed decorations in many establishments, churches and theaters in Switzerland and France (Riviera, Monte Carlo). Mr. Pelenc came to California in 1915, since which time he has made several exhibitions of his water colors; participated in the Annual Exposition of the California Beaux-Arts, and five years ago decorated at San Mateo the first modern theater in the West. With William I. Garren, Mr. Pelenc collaborated in the decorations of the Decorative Arts Show featured in this issue.

CHARLES E. PETERSON, whose Monterey sketches and paintings appear this month, was born in Madison, Minnesota, and graduated from the high school there in 1924. He received the degree of Bachelor of Arts and Architecture in the University of Minnesota and won distinction for his design of a Memorial Chapel in the 1928 Paris Prize First Preliminaries. Young Peterson has traveled extensively in the western national parks and forests on surveying parties. He came to San Francisco in July, 1928, to take the U. S. Civil Service examination which resulted in his appointment as assistant architect in the Division of Landscape Architecture, National Park Service. He is a member of the Phi Kappa Sigma, the Pi Alpha National Honorary Art Fraternity and the National Collegiate Players.

BLISS AND FAIRWEATHER, architects of the new Moore, Inc., store, San Francisco, have been associated since W. B. Faville retired from the firm several years ago. Prior to that time, Mr. Fairweather was chief draughtsman in the office of Bliss and Faville whose work included such prominent structures as the St. Francis Hotel, Balboa Building, State Building in the San Francisco Civic Center, Main Bank of Italy Building (won in competition), Southern Pacific office building, San Francisco, and Southern Pacific Depot, Sacramento.

ALBERT F. ROLLER, architect of the Sommer & Kaufmann Building (See November 1929 issue.)

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The ARCHITECT AND ENGINEER

MAY
1930

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Contents

COVER DESIGN BY WILLIAM I. GARREN

FRONTISPIECE—Richfield Oil Building, Los Angeles
Morgan, Walls & Clements, Architects

TEXT

The 1930 Decorative Arts Exhibition, San Francisco. 35
Walter T. Steilberg, Architect

Modern Art for San Francisco..... 45
Kem Weber

Sgraffitto Applied to Modernism..... 48
Simeon Pelenc

Originality in Art—What Is It?..... 49
Ray Boynton

Sommer and Kaufmann's..... 51
Designed by Kem Weber; Albert F. Roller, Architect

Moore, Inc., Adopts Modern Design for Stores..... 57

Modern Commercial Architecture..... 65
Ogden F. Beeman

The Spirit of Modern Architecture..... 67
H. C. Weller

Tradition Discarded for Modern Design..... 69
Sam T. De Remer

The Color Appeal of Marble..... 73
E. C. Porter

The Modern Interior..... 87
John F. Harbeson

The Pardee Dam..... 89

PLATES AND ILLUSTRATIONS

DECORATIVE ARTS EXHIBITION, SAN FRANCISCO

Exhibition Auditorium..... 36
Windows painted on Glass..... 38-39
Detail in Auditorium..... 40
Lounging and Living Rooms..... 41
Exhibition Niche..... 42
Carved Wood Screen..... 42
Woman's Dressing Room and "California Dinette"..... 44
A Man's Study; Exhibit Corner..... 45
A Bath Dressing Room..... 46
Woman's Bedroom..... 47

Hart, Shafiner & Marx and Sommer & Kaufmann Buildings, San Francisco..... 50
Four Views of Sommer & Kaufmann Building..... 52
Designed by Kem Weber; Albert F. Roller, Architect

The Man's Shop, Sommer & Kaufmann Building..... 54
Oval Court, Sommer & Kaufmann Building..... 55
Stores of Moore, Inc..... 56, 57, 58, 59
Security First National Bank Building, Los Angeles..... 60, 61
Morgan, Walls & Clements, Architects

Details of Richfield Oil Building, Los Angeles..... 62, 63, 64
Morgan, Walls & Clements, Architects

Post Office Building, Denver, Colorado..... 74
Tracy, Swartwout & Litchfield, Architects

Crocker First National Bank, San Francisco..... 74
Willis Polk & Company, Architects

Rotunda, Washington State Capitol, Seattle..... 77
Bebb & Gould, Architects

Store for C. H. Baker, Hollywood..... 78
Myron Hunt and H. C. Chambers, Architects

Drawings and Paintings..... 81
Charles E. Peterson

Pardee Dam..... 89

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MORGAN, WALLS & CLEMENTS, ARCHITECTS

The ARCHITECT AND ENGINEER

VOLUME CI MAY, 1930 NUMBER TWO

THE 1930 DECORATIVE ARTS EXHIBITION, SAN FRANCISCO

By Walter T. Steilberg, Architect

ARCHITECTURAL criticism should really be reserved for those freshly labeled with a University degree;—whose ideals have not yet been dimmed or convictions shaken by struggling with requirements considerably more rigid than a Beaux Arts program. Twenty years of trying to achieve something not altogether ugly, in materials more stubborn than Whatman and washes, dulls the critical faculties,—particularly when they are directed to the works of friends. If, furthermore, these works are attempts to express the new spirit which is animating the arts, and the critic has had both training and experience in the old school,—"Imagine his embarrassment." For the aforesaid reasons the reader will understand that, although offered in the form of statements, practically everyone of the following remarks should begin: "It is the writer's opinion."

In the general design for this year's Decorative Arts Exhibition in San Francisco, Mr. Garren made a distinct departure from the scheme which was used last year by Rudolph Schaeffer. By filling the arches at the sides of the hall with large squareheaded steel windows, decorated with paintings in "Lamp dip" on sanded glass, and illuminated by flood lights from behind on the side galleries, and by squaring the clumsy elliptical end arch, Mr. Garren transformed and greatly improved the general proportions of the room; with the light coming chiefly from these "clerestory" windows, and the special exhibit booths in deep recesses under the windows, the typical cross section of the room was not unlike that of a nave with side chapels. The outstanding achievement of last year's show was the remarkable unity of the ensemble, in which respect it surpassed the best rooms in any of the modern art shows which I had seen the previous season in Austria, Italy, Germany and France. With its form simplified by the filling in of the gallery arches, this year's exhibition room should have been equally fine in ensemble effect. In those eight large clere-story windows, the architect provided an unique opportunity for the eight artists who were invited to paint them,—a rare chance to prove to the art-loving world, and to architects in particular that modern artists can cooperate and can adapt their own special theories and ways of working to produce something

Photo by Alta Studios

AUDITORIUM, DECORATIVE ARTS EXHIBITION, SAN FRANCISCO

DESIGNED BY WILLIAM I. GARREN, ARCHITECT

which will fit into and help the general composition of a room or building. Showing a generosity which he would hardly have been free to exercise in permanent work, and with well-justified confidence in the ability of these artists, Mr. Garren gave them all possible freedom to express themselves. They took it;—in eight different directions. These paintings remind one of Kipling's poem which describes the hereafter of the deserving artists:

"Each in his separate planet
And each in his separate star
Shall paint the thing as he sees it
For the God of things as they are."

The trouble is that we are not yet in separate planets. The scale varies from the miniature to the colossal; the colors range from the "infra" to the "ultra" end of the spectrum; and some are laid on as heavily as oils and some as delicately as water colors. Some have a pictorial quality and others have a pattern quality. Some are flat, and emphasize the fact that they are coplanar, while others fairly revel in linear perspective; like that Renaissance artist whose wife used to throw cold water on him to make him quit studying "this fascinating science of perspective" too late in the evening. Some of the paintings carefully regard the structural lines of the steel muntins while others pay no attention to them whatsoever. The subjects range from an abstract checkerboard pattern which might be entitled "Sunshine After Rain" to a sort of "History of San Francisco at a Glance." There is "An Impression of an American City,"—imaginative and beautifully simple and nearby a clever composite picture showing four episodes in the fall of Eve; It is a pleasure to note that Adam is not involved in this version, and all the blame is placed on the serpent and the apple. There is an interesting composition with pleasant, quiet, consistent coloring which seems to represent some plain people picking pears from a telephone pole. A picture of a waterfall in which the artist ingeniously seizes the possibilities of the glass as a means of indicating water and has presented a valuable motif for murals which are intended to lead the eye upward. There is a colossal figure, evidently female and said by some to represent "Eve's comeback" as a sort of rebuttal to "The Fall of Eve" which has the habit of following you with her eyes wherever you happen to be in the room; the unwavering glance of this forceful woman kept me from handling some little plaques which looked good enough to touch. There is a very powerful composition which may or may not represent "The Creation" or "The Last Judgment;" excepting for the ungainly drawing of the figures (which is not natural to this capable artist) this is one of the most impressive modern paintings that I have seen. While this great diversity of subject and method may indicate great vitality in modern art it also shows that the movement has not yet become oriented; that the direction of its main stream is still undetermined. Variety in these paintings was certainly desirable; but it could have been gained without the sacrifice of the unity of the composition of the room itself; anyone doubting this statement is referred to the clere-story of Sainte Chappelle or of Chartres Cathedral.

Individually these paintings are all interesting and in several cases, excellent; specific criticism is more properly the province of a painter. I cannot refrain, however, from expressing the hope that several of these able artists will presently recover from the "Riberitis" and (like one of our most talented sculptors) will soon be themselves again. The 19th century ambition to paint "as big as life and twice as natural" was certainly a mistake; but does that warrant the artists of today in painting twice as big as life (in spots) and half as natural? Is not the imitation of the primitive just a special phase of that very periodism from which modern art is struggling to escape? Lisping in a child's first efforts to express himself can be charming; when affected by an adult it can be distressing.

There are several other factors which detracted somewhat from the ensemble effect; —attention is called to them to emphasize the importance of details and not in any spirit of fault-finding. Down the center of the hall there are three stands for small

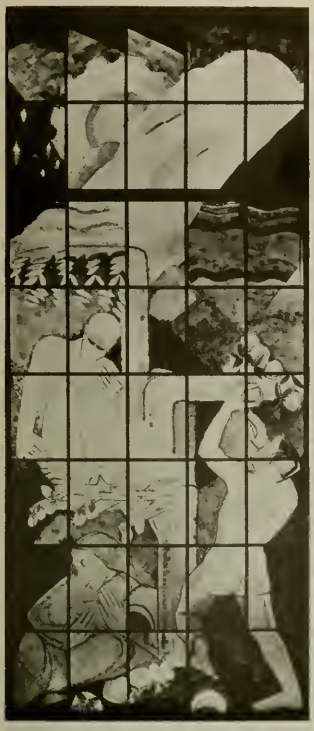
Window Painted on Glass by Florence Alston Swift

Window Painted on Glass by Marion Simpson

Window Painted on Glass by Frank Bergman

objects d'art; these stands are illuminated by tubes of white Neon light along the sides, and large octagonal lanterns in the center. The Neon tubes have been properly shielded but the glass from the lantern not only provides poor lighting, but also weakens the focal effect of the glass fountain in the garden and detracts from the general composition. The garden at the end of the hall, although interesting in design and flower arrangement "fades out" at the top as a composition and does not dominate the room to the extent that its terminal position demands. This end opening, occupying a position analagous to that of the apse of a church, is framed by far the largest "picture" in the room, a picture which should have been a powerful unit. However, due to defective lighting or lack of consideration for ensemble effect in design, the garden club's exhibit does not "fill" this opening, the lower part being very dark and rich in coloring and the upper part very pale.

However, in making any criticism of the lighting it must be acknowledged that illumination has become an art in itself, and that owing to the diversity in the character and technique of the window paintings, the problem was in this instance greatly complicated. Certainly the lighting of the windows was done with great skill, as was the indirect lighting of the "pylon" and pylon exhibit cases between the booths. Considering the excellence of most of the lighting, it is highly probable that whatever defects there were in the stand and garden illumination, were due to the hurry of finishing the exhibit to open on schedule time; or "maybe I'm wrong" and there were no



Window Painted on Glass by Amy D. Flemming

Window Painted on Glass by Ray Boynton, assisted by Hazel Driscoll, Elfrida Nagel and Harold Dean

Window Painted on Glass by Peter Frederickson and Gustav Breuer

defects. In any case, it would do no harm in the future to allow the illuminating experts a full day to make readjustments after the show is all ready to open.

In general the architectural design was ingenious and certainly superior to the previous ones in the opportunities which it presented for the exhibiting artists. Mr. Garren, who is responsible for the plan, and Mr. Pelenc who developed the color-scheme, are to be congratulated. I particularly regret that the painters did not co-operate to produce a unified ensemble. The day is approaching when machine made and stamped ornament of all sorts will be absolutely eliminated from our buildings, and whatever decoration they have will be individual works by real artists. That day has already come in northern Europe and it cannot be far away in America. For the artist who will work in cooperation with the architect and with more thought for the building or the room as a whole than for his own special theories, there will be opportunities such as artists have not had for centuries.

It is interesting to note that the exhibits in the booths showed an advance over those of last year; probably not because they are for the most part by different artists but because there has been a decided improvement in interior design. Some twenty or thirty years ago the mission furniture or "craftsman" era came to an untimely end through the evil effects of fashion and freakishness. There have been some symptoms of these disorders in the modern art movement and it was therefore particularly gratifying to find in this year's exhibition designs which were, on the whole, sane and

AUDITORIUM SHOWING PAINTED WINDOW BY MARION SIMPSON
ALCOVE BY JACQUES SCHNIER

CORNER OF A LOUNGING ROOM, DECORATIVE ARTS EXHIBITION
Designed by Jacques Schnier; Textiles, Rose Pauson and Vera Henry; Furniture, Don Works; Lamp, Conway Davies.

LIVING ROOM, DECORATIVE ARTS EXHIBITION, SAN FRANCISCO
Designed by Fred Baldauf; Executed by A. F. Marten

DECORATIVE ARTS EXHIBITION, SAN FRANCISCO
Carved Wood Screen in Teak by Haines Hall,
Stanley Helmore and Wayne Rossler

SMALL EXHIBITION NICHE
Wood carving by Dorothy Wagner Puccinelli, Lacquer Cabinet by Gustav Brener;
Linoleum Blocks on Linen by Helen Myers

practical. Last year I was told that the object of making living room chairs very low in imitation of automobile seats was "to make the ceiling seem higher; they gave a sense of space;"—a precious thought which was evidently inspired by that old saying that "Short sheets make the bed seem longer;" they also give a sense of space. There is but one chair in this show from which an able bodied man cannot escape unaided. The exhibit booths represent rooms or portions of rooms; a business office, a man's study, a dinette, a bathroom, a bedroom, a woman's dressing room, a lounge and a living room. These rooms have a much greater sense of reality than is usually found in such exhibits; some are positively habitable. A change that has evidently come in furniture in the last year is the rounding of the sharp corners. In 1929 one could not live with modernistic furniture without being skinned alive. Evidently the designers must have suffered some themselves, for a little consideration has been given to the sense of touch—that sense which the Chinese have for centuries regarded as ranking with the sense of sight in determining the quality of an object of plastic art. We are told that one of the basic principles in modernist furniture and interior design is the expression of function—the most careful regard for utility. Most of the rooms give the impression of this much desired simplicity, but some of them show a surprising disregard for essential qualities or equipment. The illumination of the business office is about the worst that could be devised and the same criticism applies to the dressing table and couch in the woman's dressing room; in each case evidently a stunt of design rather than an expression of the real need. In the dressing room there are no drawers for small things, no hanging cupboards for long ones. Many of the cupboards do not give due consideration to the hardware fittings; hinges might better be concealed entirely, or else made a feature in which case the sense of touch should be considered as in Chinese hinges. The bathroom has more corners to keep clean than any bathroom has a right to have, the values are badly placed and it is not clear just how the shower problem is solved; on the other hand the lighting by tubes at the sides of the wash basin and cabinet is exceptionally good. (and there is no black bath tub, that latest inanity!) The plain, flush cupboard doors, depending upon the beauty of the wood rather than paneling for enrichment, are certainly an improvement; and I know from practical tests that most of the chairs and couches are comfortable. Another noteworthy advance is the greater use of natural finish for hardwoods.

Some of the smaller exhibits deserve special mention. Textiles by Dorothy Schroth, Rose Pauson, Helen Forbes, Margaret Rosken, Peter Frederickson and Gertrude Mattocks; Carved Panels by Puccinelli; Stained glass set in cement by Weisenberger; Sand blasted glass by Dorothy Wagner; Sculpture by R. O. Van Horn, Florence Richardson, Adelene Kent, Mrs. Bailhache, and Jacques Schnier. A small panel (No. 102) by Schnier is one of the finest works of modern art that I have seen anywhere; I don't know what the owner paid for it but my prophecy is that it will be worth ten times as much in ten years.

The artists who did special work for this exhibition—such as the large painted windows, the booths, and the garden, gave most generously of their time and talents; and with little prospect of quick returns. It can be said in all sincereity that they did it "for their art's sake." In consideration of this fact, some of the foregoing remarks might seem a little unkind; praise might be more in order than criticism. But I know these artists, and know that they are big enough not to hunger for flattery. And so I have tried in this article to "do as I would be done by." I have said frankly what I have thought, endeavoring to give a clear description of an architect's impressions of this exhibition. If I have risked hurting the feelings of good friends, it has been in the hope that my criticisms might bring about a better understanding of the purposes of the mother of arts—architecture.

A WOMAN'S DRESSING ROOM, DECORATIVE ARTS EXHIBITION, SAN FRANCISCO
General Design by Marion Simpson and Margaret Schevill; Mural Decoration, Locretia Van Horn; Sculpture, Valerie Kaun; Furniture, Marion Simpson; Rug, Margaret Schevill

"CALIFORNIA DINETTE," DECORATIVE ARTS EXHIBITION, SAN FRANCISCO
Designed by Carl Young; Furniture, Carl Young; Sand Blast Window, Dorothy Wagner; Wood Penels, Raymond Puccinelli

A MAN'S STUDY, DECORATIVE ARTS EXHIBITION, SAN FRANCISCO
Interior by Don Works, Assisted by George Meyer

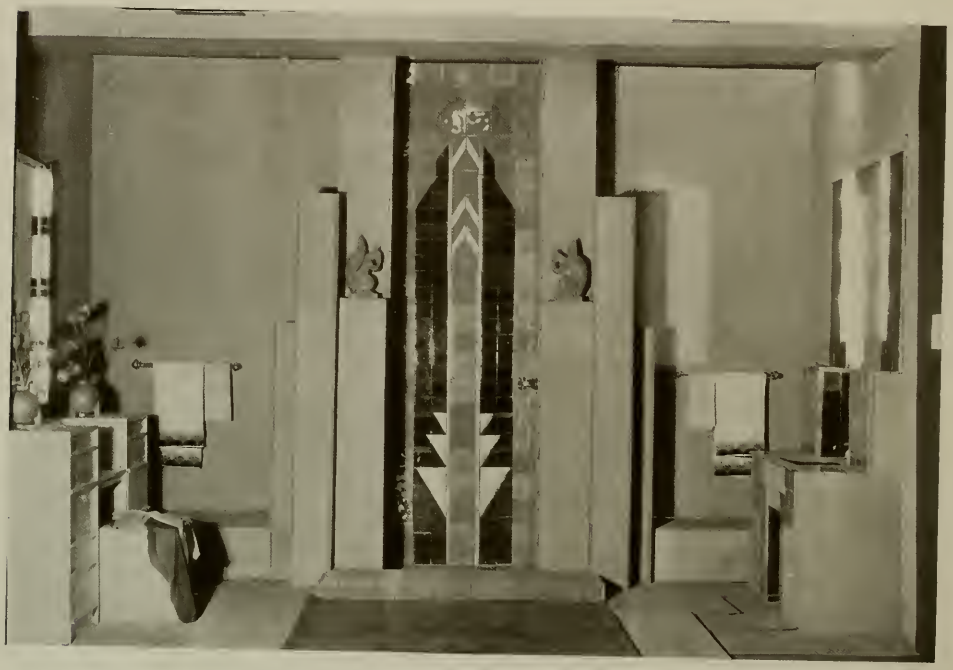
CORNER OF INDIVIDUAL EXHIBIT
Hangings by Andrea A. Sbjornson; Hook Rugs, Ruby Prior; Magazine Stand and Lamp, Emilie Sievert Weinberg

MODERN ART FOR SAN FRANCISCO

By KEM WEBER

AMERICAN art created in our age must be logically modern American art. It does not have to be grotesque, fantastic, illogical or without purpose. In fact, since any artistic expression reflects the environment in which it was created, bizarre forms and colors would give to the art historian of the future a basis on which he would determine the characteristics of the nation and the time in which it was created. If we insist in talking about art development in modern America we should encourage an interpretation of the best environment, preference and idealism characteristic of our country. Aesthetics should govern our efforts in the design and development of our commodities.

To find an aesthetic solution for a given problem and to bring such solution into well balanced form and color, considering the economical, practical and structural necessities, is the real basis of good design. This has been true of all ages prior to ours and is still true today. Any limitations as to form, materials or color combinations have no place in true art.



A BATH DRESSING ROOM, DECORATIVE ARTS EXHIBITION, SAN FRANCISCO
Designed and Executed by Florence Richardson and Rose Pauson

When we adapt directly for the architectural efforts in our homes, in our business buildings, in our offices and in our places of amusement, the art of prior periods; when we build our modern American structures in Egyptian, Romanesque, Gothic, or the Renaissances of the middle ages and on up the line to Colonial, then we cannot talk about creative art at all. We confess our inability to express our national feelings artistically. We confess that we are trying to be what we are not in order to appear what we want to be. We stand in the world of today on top of an inferiority complex. We don't dare to be ourselves. All of which of course is utterly without reason except with the probable excuse that we as a nation are very young. However, we are beginning to grow up and it is in the awakening to that fact that we begin to feel the strength within us for self-expression.

To make beautiful things by hand and mould into them the individualism of the maker brings out the fine romantic qualities. Which qualities we have lost in the progress of that particular development of which all of America is proud. Production in every field is based upon the ingenuity of this nation to find labor saving devices and to simplify the drudgeries of hand labor. There is no question about the

beauty of intricate wood carving or painstaking hand woven tapestries but the increase in the value of time in our modern age limits such efforts to the field of recreation.

Since we must persevere further and apply aesthetic beauty or art to our surroundings, it seems logical to base our efforts on modern methods, using modern materials for modern requirements. This does not mean that we should destroy our collections of beautiful things of the past; it also does not mean that we should forget the fine painters and sculptors of this age; in fact we should preserve the beautiful things we already have and we should encourage and assist the sensitive modern painter and sculptor by giving them not only opportunities to express their ability but by reimbursing them in accordance with the outstanding qualities they possess. But it does mean that we should stop wasting labor and effort in copying the handicrafts of past ages. We can never succeed in making better copies than the originals and should, therefore, endeavor to make our own originals within the limits and advantages of our own time.

Each younger generation appears to be a problem to their parents because they do things in their own way, different from the way their elders have done them. Their young minds adapt themselves to progress only to realize that their children will surprise them in the same way. As much as our romantic inclinations would want to preserve the things that have been, as little can we succeed in stopping the developments that will be, and it would be unfair to the fertile mind of youth to insist on constant repetition.

A WOMAN'S BEDROOM, DECORATIVE ARTS EXHIBITION, SAN FRANCISCO
Designed by Jeanette Dyer Spencer

SGRAFFITTO APPLIED TO MODERNISM

By Siméon Pélenc

THE Italian word sgraffitto means to scratch.

Long before men could write or draw with charcoal, pencil, ink, etc., they were able to mark and scratch the rocks of their caves. Since that time the impulse to scratch a newly plastered wall before it hardened has been shared by every member of the human race. There is something irresistibly fascinating about it, and the sensation felt is comparable to that when drawing with charcoal on rough paper.

Sgraffitto is the process of applying two or more layers or coats of different colored plaster on a wall in certain definite areas to be decorated, and after it has taken its set (the design transferred by means of perforated drawing) is scratched through with a metal tool, knife or nail into different parts of the design, revealing the dark plaster underneath. The contrast of the two colors is increased by the difference of the smooth surface of the top coat and the rough and velvety texture of the scratched background. This cannot be imitated by painted decoration. The light parts of the top coat form the design, and these also may be painted in fresco. Scratching and painting are done simultaneously during the process of applying the layers of plaster. Flat surfaces of every size and shape can be decorated by means of sgraffitto, and the design may run from geometric divisions to the most intricate arabesque.

Sgraffitto is a flat decoration. It has the immense advantage over relief ornaments and mouldings in that it is more effective at long distances at any time of the day regardless of light; furthermore, sgraffitto is like an etching on a large scale having all its qualities. Its beauty lies in the design, scale, color, and its relation to architecture. This process was followed for centuries without change and when a work of sgraffitto was executed, the artist who made the design was obliged to climb the scaffold and do the work. Today there is a great change, thanks to the equipment and materials used. Layers of plaster and coats of color are sprayed in perfect uniformity almost immediately one after another. This is a great time saving. The materials are brought on the job from the plants after having been mechanically and perfectly mixed. The cost of sgraffitto executed in the workshop is greatly diminished, especially in cases of repeated patterns; otherwise, the price varies according to the design, but it will never exceed that of cast cement.

Sgraffitto was at its height at the Renaissance period and some are still charmingly adorning many Tuscan villas and palaces. Concrete buildings may lose their dignity by some poor cast ornaments trying to imitate sculpture, but they will never lose it by having an appropriate flat decoration in sgraffitto. Hence architects are paying more and more attention to this practical and artistic process of decoration. The process has indisputably proven its durability and effectiveness for centuries and today seems the most appropriate for modern architecture on concrete buildings. The range of colors has been enlarged and with a good understanding of a decorative scheme, it offers a variety and brilliancy of colors never seen before. Unlike a relief decoration, sgraffitto will permanently retain its fresh and clean appearance even in dusty and smoky cities.

It is gratifying to know that the campaign of fresco painting started in these columns six years ago, has made such rapid strides and without doubt decoration in sgraffitto will follow its elder sister.

ORIGINALITY IN ART—WHAT IS IT?

By Ray Boynton

THERE seems to have been a long period in which the decorative arts were carried on in a different world, or at least in a kind of no-man's land seldom entered by the creative artist. His effort centered on paint and canvas almost exclusively. This has been a misfortune all around and particularly for the artist I think. He has lost his sense of craftsmanship and with it an important contact with reality and consequently with life. There is even an attitude among the parnassians to exclude the decorative arts as something outside the pale and beneath their consideration. Yet there is plenty of evidence that every great style in art touched everything that was used in daily life as well as cathedral windows and monuments. This lofty unconcern on their part is really a sign of poverty and confusion. It is the purely decorative arts of the period that we know in the stained-glass window and the ornamentation of Gothic architecture, in the manuscript illuminations and in the tapestries. Fresco in its noblest forms is a decorative art. In these examples how does one draw a distinction between creative and decorative art? I suspect it is our absorption in the easel picture and the statue that have left us so high and dry. We have somehow come to regard them as the sole vehicle of the arts.

It is no unhealthy sign in our day that so many young artists are experimenting in other materials than paint and clay. They carve wood and make furniture and work in metals and are interested in fresco. All of these are really crafts and touch realities. From their materials they will learn to find proportion and meaning and perhaps originality, rather than from sterile theories.

It may be because we have had no defined style of any authority for a long time that things have gone to loose ends in the decorative arts. It has forced the artist to concentrate almost exclusively on the easel picture and the statue, and this has gone on for so long that we do not regard the wall itself as important any more except as a background. We paint a large easel picture and call it a mural decoration or a not quite so large one and call it a screen or a tapestry.

For this reason I think it of great importance to all the arts that architecture is beginning to emerge in forms that define style. Steel and glass and concrete are beginning to assert themselves in real forms. With style in architecture other arts have direction in which to develop. This has been the case before in history and it should be true again. Artists will not necessarily abandon the easel picture; from being stimulated to create in other modes they will probably paint better easel pictures.

There is need for someone to define what constitutes originality in art. It has been exalted inordinately but what is it? The student has been led to believe that it is more important than technical sufficiency or sustained effort to achieve completeness or even sound understanding of the mechanics. The result is often just careless extravagance or tour de force or bizarre generalization. The artist often mistakes it for the last thing that is being taught or discussed in the studios of Paris or Munich. A means is solemnly accepted as the end in itself, and the result is just another fashion or formula that will be outmoded by the next one. It fosters a kind of Colonial outlook which leaves us in doubt about our own authority to decide anything. There may be some virtue in candor of vision and clarity of statement; in an honest coming to grips with materials and environment.

Photo by Will Connell

HART, SHAFFNER & MARX AND SOMMER & KAUFMANN BUILDINGS, SAN FRANCISCO

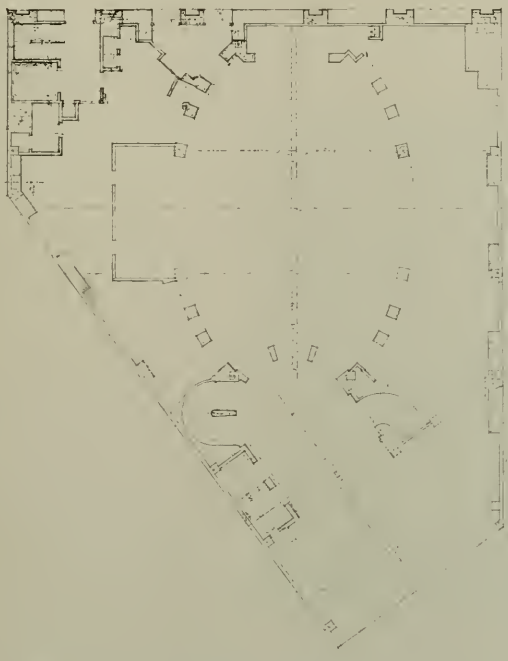
SOMMER and KAUFMANN'S

Designed by Kem Weber

Albert F. Roller, Architect

THE idea originating with the firm of Sommer & Kaufmann of San Francisco to create a merchandising machine for the purpose of selling shoes has been realized. They are doing business today with the assistance of this machine designed to fulfill all requirements necessary for effective functioning. Contrary to most prior efforts to build an architectural monument surrounding or housing the functioning of a shoe business, their store has become a vital part of its organism and is an attempt to solve this problem, using the requirements as a basis for its solution.

Aside from the already established confidence of the public in the merchandise and merchandising methods of this firm, it is important that the appearance of their store creates in the mind of the prospective customer the feeling of confidence, the assurance of their understanding for progressive American needs, reliability and dignity. Honesty in material and purpose applied in their housing will enlarge the confidence in the honesty of their business methods.



PLAN, SOMMER & KAUFMANN BUILDING, SAN FRANCISCO
Albert F. Roller, Architect

As little as the shoe worn by our ladies today is a copy of the shoe worn by a Florentine beauty of the Fifteenth Century, as little should the environment of the store be a copy of the Rennaissance of that time or a copy of any period in design strange to us, our methods of living, and the ideals of our age.

The outside cover of this machine, the street facades, were decidedly governed by: first, the necessity of having large and unobstructed display areas on the street floor and having these areas supported by light effects which will attract the attention of the casual passerby; second, by the necessity of having as much daylight as possible in the upper floors; and third, by the necessity to counteract the turmoil of electric whirling signs, the loud attempts to attract attention through wild shouting with queer forms and colors through superimposed advertising.

The facades, therefore, are solved by combining the given necessities with the simple dignity of materials used, attractive through good balance, good proportions, color and reflection, and by using the necessary advertising

ENTRANCE LOBBY TO SOMMER & KAUFMANN BUILDING, SAN FRANCISCO
Designed by Kem Weber; Albert F. Roller, Architect

OVAL COURT, SOMMER & KAUFMANN BUILDING, SAN FRANCISCO
Designed by Kem Weber; Albert F. Roller, Architect

signs to support the design. This method fills the requirements and is not handicapped by an effort to superimpose other periods upon a problem without parallel within periods prior to ours.

The same underlying principle of truthfulness to purpose has been used throughout the building, solved with a profound consideration of the aesthetic reaction to the visitor and all of the operating functions of the machine.

To build a room as a background for men's shoes, with wood panels, stone floor and leather furniture, does not necessarily limit us to copy the detail of an old English country home of Lord so and so. In fact if the merchant had to depend upon his lordship to support the success of this merchandising establishing it would prove a failure, therefore, the use of mannish materials is developed into a room for the American every day man, pleasant and restful without detraction from the merchandise, and with concentration on comfort, quick service and efficiency.

The salon for ladies' ballroom slippers with silk covered walls and fine woods doesn't necessarily command that our ladies should be placed into the environment of the more or less questionable attractions of the Court of Louis the Sixteenth. This salon is rather reflecting the simple and restrained dignity of our American ladies in a spirit of formal festivity.

There are lobbys, a large oval court, rooms for less and more expensive shoes for various occasions, rooms for children and for young girls and boys, rooms for health shoes, and each one of these rooms has dictated by its purpose the solution employed.

By basing our efforts in the design of a building or store solely upon the given area, the given economic and technical restrictions, and the given problems with an attempt to create an environment for a given purpose, does not only limit our possibilities of using handed-down architectural forms of prior ages but in most cases eliminates the possibility of even employing an adaptation sufficiently truthful to

maintain a relationship with the periods we attempt to reconstruct for modern American needs. As much as retail shoe distribution, on a scale as successfully operated by the San Francisco firm of Sommer & Kaufmann, is based upon modern American methods to do business, as much must the architectural solution be based upon modern American design.

To quote Albert F. Roller, architect, "That the latest and most up to date improvements in store technique and design have been embodied in this earthquake and fireproof building. Its Class 'A' construction includes the finest and most durable materials obtainable, as well as the interesting use of marble, metal and inlaid woods. It contains 325 tons of structural steel and approximately 2200 yards of reinforced concrete. Its stock rooms and selling spaces are protected by an automatic fire detection system, making a general conflagration impossible. An elaborate ventilating system provides a complete change of air every six minutes, cooled in summer and warmed in winter, and washed and filtered before it passes through the labryinth of ducts and pipes that supply the various rooms.

"Innumerable high power outlets and reflectors simulate a day-light effect in every department. A pneumatic tube system to the general office on the second floor and commodious central wrapping and checking station insure the rapid and adequate transaction of business.

"Two high speed, self-levelling passenger elevators provide easy and convenient transportation.

"Every device for the safety and convenience of the customers and employees has been incorporated—the owner's sole ambition being to provide the utmost for the shopping public of San Francisco.

"An entirely new vogue in modern architecture has been achieved in the design of this building. While the terra cotta, metal and marble exterior is formal in tone and expresses its purpose with dignity and distinction, the interior has been subtly fashioned to meet the most exacting requirements of a sophisticated clientele."

EVENING SLIPPER ROOM, SOMMER & KAUFMANN BUILDING
Designed by Kem Weber; Albert F. Roller, Architect

BLUE ROOM, SOMMER & KAUFMAN BUILDING SAN FRANCISCO
Designed by Kem Weber; Albert F. Roller, Architect

Photo by Will Connell

THE MAN'S SHOP, SOMMER & KAUFMANN BUILDING, SAN FRANCISCO
DESIGNED BY KEM WEBER; ALBERT F. ROLLER, ARCHITECT

Photo by Moulin

OVAL COURT, SOMMER & KAUFMANN BUILDING, SAN FRANCISCO
Designed by Kem Weber; Albert F. Roller, Architect

THEY HELPED TO MAKE EXHIBITION A SUCCESS

By WALTER T. STEILBERG

IT IS chiefly the Society of Women Artists and the Women's City Club who have made possible the Decorative Arts Exhibition in San Francisco, but acknowledgements are also due those manufacturers, contractors and merchants who have contributed money, materials and labor—labor which is, in some cases, skilled craftsman labor, worthy to rank with the arts. These concerns have gone to no little expense with less than a little chance of direct returns; their help has been given, not in the spirit of advertising their wares or services, but rather for the advancement of public interest and understanding for building and interior design. They have given in the same unselfish spirit in which the artists have given, and inasmuch as they are obliged to watch their profits and losses closely, they deserve the more credit for the whole-hearted way in which they have supported this year's show.

There is a tendency among certain artists to do a great deal of deploring of commercialism, and in some cases they are undoubtedly justified. But architects, whose work brings them in constant touch with facts as well as theories, have opportunities to learn that there are still many real artists among the building craftsmen, many generous and genuine patrons of art among those very men who are so often credited with nothing but business acumen.

Photo by Moulin

KEARNY STREET STORE, MOORE, INC., SAN FRANCISCO

BLISS & FAIRWEATHER, ARCHITECTS

MOORE, INC., ADOPT MODERN DESIGN FOR STORES

Photo by Moulin

ALONGSIDE the Sommer and Kaufmann Building, San Francisco, Moore, Inc., have just completed a unique building for Hart, Schaffner & Marx clothes—unique for its very small frontage, its daring color scheme and its modern tendencies. The building was designed by Albert F. Roller, architect, and Bliss and Fairweather, associated. The structure is characterized both inside and out by an abundant use of color. The exterior is of Colorado Yule marble. The interior decorative motifs are modern.

A new Hart, Schaffner & Marx store has also only recently been completed on Kearny Street, near Sutter, San Francisco. The ground floor of the old Doe Building has been completely modernized by Bliss and Fairweather. It has been designed throughout to produce a "club atmosphere." The color scheme is in dull reds, browns and yellows with angular design, giving an American Indian touch. The exterior of the store is of white marble and black onyx.

KEARNY STREET STORE, MOORE, INC., SAN FRANCISCO
Bliss & Fairweather, Architects

KEARNY STREET STORE, MOORE, INC., SAN FRANCISCO
Bliss & Fairweather, Architects

LIGHTING OF ART EXHIBITION

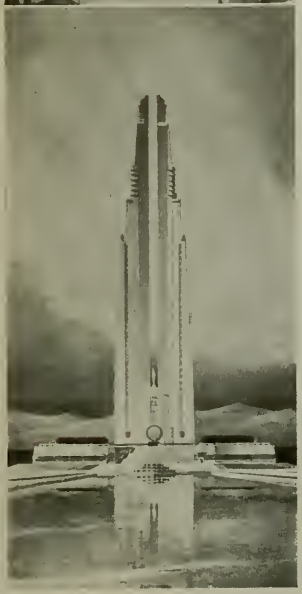
ONE of the features of the Decorative Arts Exhibition not immediately apparent to the casual observer, was the splendid illumination of the eight large glass windows painted by famous California artists and which formed the main attraction of the exhibit. The lighting equipment behind these windows was loaned by the Frink Corporation and they themselves supervised as far as possible the installation.

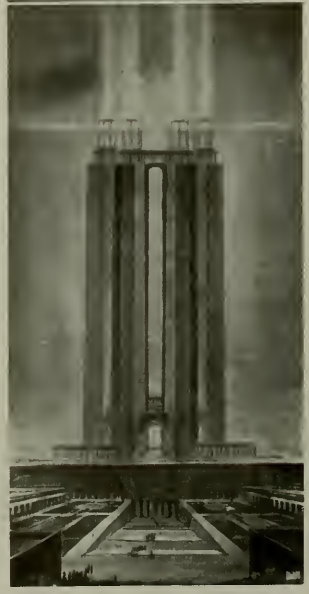
The lighting of painted glass windows is an art in itself. Color values, distribution of light, intensity of light and many other factors must be taken into consideration. There is also the character of the paintings to be considered. For instance, a panel such as the one done by Frank W. Bergman, is purely one of design and the light must aim to produce an even glow from top to bottom of the panel, whereas in the case of the window by John Emmet Garrity, who paints primarily in colors and not in outline, the light must be so adjusted that the colors are brought out in their true value, particularly in view of the fact that Mr. Garrity painted this window under daylight and his colors are intended to be viewed under light equal to daylight value.

Considering the handicaps under which this temporary exhibit was erected and the necessity of curbing all expenditure, the results obtained in the illumination of the windows were remarkable.

Considerable interest was given to the illumination of the large pylons dividing the display spaces for which the Frink Corporation also was kind enought to loan the necessary equipment.

FOUR STRIKING DESIGNS SUBMITTED IN COLUMBUS LIGHTHOUSE COMPETITION





On this page are shown photographs of four of the ten designs placed first in the preliminary competition for the Columbus Memorial Lighthouse. Three of the drawings are by American architects. Selection of a final design will be made by an International Jury which meets at Rio de Janeiro, Brazil, later in the year. In the first stage of the competition, in which the competing architects were allowed the maximum freedom to express their ideas, 455 architects from 46 countries participated. The designs were judged by an International Jury of Award, selected by the competitors themselves, and composed of Raymond Hood, of the United States, representing North America; Horacio Acosta y Lara, of Uruguay, representing Latin America; and Eliel Saarinen, of Finland, representing Europe.

The program of the preliminary competition stipulated that the ten architects whose designs were placed first, should recompete in the second and final competition. In addition to being declared the architect of the Lighthouse, the author of the design placed first in the final competition will receive a prize of $10,000; second prize will be $7,500; third prize $5,000; fourth prize, $2,500; and $1,000 will be paid to each of the other six competitors.

* * *

Upper Left—
Joaquin Vaquero Palacio
Louis Moya Blanco, Madrid

Lower—
Will Rice Amon, New York City

Upper Right—
Helme, Corbett and Harrison
Robert P. Rogers and Alfred E. Poor
New York City

Lower—
Louis Berthin, Georges Doyon,
Georges Nesteroff, Paris

Photo by Mott Studios

SECURITY FIRST NATIONAL BANK, LOS ANGELES
MORGAN, WALLS & CLEMENTS, ARCHITECTS

Photo by Mott Studios

INTERIOR, SECURITY FIRST NATIONAL BANK, LOS ANGELES

MORGAN, WALLS & CLEMENTS, ARCHITECTS

Courtesy Gladding, McBean Co.

DETAIL, RICHFIELD OIL BUILDING, LOS ANGELES

MORGAN, WALLS & CLEMENTS, ARCHITECTS

DETAIL, RICHFIELD OIL BUILDING, LOS ANGELES

MORGAN, WALLS & CLEMENTS, ARCHITECTS

Sculpture by Haig Patigian

RICHFIELD OIL BUILDING, LOS ANGELES

MORGAN, WALLS & CLEMENTS, ARCHITECTS

MODERN·COMMERCIAL·ARCHITECTURE

By Ogden F. Beeman.

THE modern skyscraper was made necessary primarily because of the high cost of land in our large cities, particularly on Manhattan Island in New York and the Loop district of Chicago, and made possible by the invention of structural steel skeletons and the rapid transit elevator.

After a considerable number of these buildings had been erected it was discovered that the streets became narrow canyons through which the people passed, and offices on the lower stories had to use artificial light in broad daylight. This condition was met by the New York Zoning law of 1916. Stated in plain language, this law said that no building should be constructed on the street front higher than twice the width of the street. It gave permission, however, for stories to be run above this height if they set back a certain distance in order to permit sight lines to be run from the center of the street through the high point we have mentioned—twice the street width.

The effect architecturally was that which a child might achieve by piling his blocks in cubical and rectangular shapes, making them wide at the bottom and tapering in pyramidal form to the top. Manifestly the old styles of architecture were found to be at a great disadvantage in meeting this new problem.

The classic feeling was utilized by the office, McKim, Mead and White (those inveterate classicists!) on several office buildings. It has been tried in modified forms by a few others, but at present it seems to be discarded as unsuitable and superfluous. The Blackstone Hotel in Chicago utilized the French influence with its quoins, pavilion roof, and cornice, but one could not very easily imagine a building getting beyond its height and still retaining its character.

The English half-timber could be superimposed for three or four stories as was successfully done in the New York shop of Todhunter, but could not be logically carried beyond that height.

The Gothic alone of all the ancient styles most successfully met the need of the early skyscraper, The University Club of Chicago used a form of Gothic with the cornice and embattled parapet, but the last two features have no place in the modern multistoried building. So much for the architectural limitations. The New York zoning law of 1916 put the final quietus on ancient styles, especially if the builder intended to carry the structure above the height on the front street as he is permitted to do by setting back behind the sight lines.

In the Woolworth Building, Cass Gilbert has given us a Gothic shorn of much filigree, including the cornice, and has very fittingly used the flowing vertical lines to express its structure.

The last of the great Gothic structures was the Tribune Tower in Chicago which was won by John Mead Howells and Raymond M. Hood in the competition of 1922. This building is artistic and proper in every way and beyond doubt received the place it deserved. However, the Tribune Tower did not require set-backs in the generally accepted form in its particular location.

Strange as it may seem, the set-back has been successfully met not by an American but by a Finlander by the name of Eleil Saarinen. Saarinen, after having been educated in Germany, entered the competition and was awarded second place. Many au-

*Abstract of an address at the Institute of Architects, Spokane, Washington.

thorities on, and students of, architecture thought that this Finlander had found the real solution of the problem even though he was somewhat in advance of his time for it to be fully appreciated.

It might be well to inject at this point a little history, especially as it centers in Chicago, the home of this same Tribune Tower.

The Columbian Exposition of '93 is generally regarded as marking the Renaissance of American architecture from the abysmal dark age into which it had fallen during the previous half century. It is perhaps not so generally given credit for being the cradle of our modern or "moderne" style of design which must include of course the multi-story office building.

Louis Sullivan in his Transportation building tried to show that the form expresses the function. Because of his anti-Beaux Artian preaching and practice, Louis Sullivan's name became anathema to the established school. His work was carried on by his followers and by his writings.

It seems very logical to suppose that the Cessionists in Germany (those who chose to break away from the established architectural order of things) had been influenced by Sullivan. However, our evidence, logical as it seems to be, is purely circumstantial. If, on the other hand, the European school did not know Sullivan or "Sullivanesque" the argument for modernism seems all the more convincing and conclusive.

So we see that the stone which the builders rejected became the head of the corner. Where Sullivan lived and worked for his "lost cause" the pearl of great price came to light, namely the functional design of Saarinen in the Tribune competition.

It is interesting to note that the very next building of this type built in this country was the American Radiator Building in New York in which Raymond Hood used Saarinen's motifs and scheme of design almost verbatim. In fact, the entire form of the building is very similar to Saarinen's Tribune Tower solution. Mr. Hood's associate in the Tribune Tower, John Mead Howells, likewise copies the style in his Pan-Hellenic House in New York.

Since 1922 the sky lines of our great cities have changed and are becoming more and more spotted with designs of this character which eschews the classic orders, including columns, cornices and ornaments almost entirely.

TRAVEL AND TRANSPORTATION BUILDING, 1933 WORLD'S FAIR, CHICAGO, ILLINOIS

THE SPIRIT OF MODERN ARCHITECTURE

By H.C. Weller

THERE is no need to tell anyone that art and architecture have "gone modern." But what does it mean? Does it mean a radical change in looks? Does it mean that we shall throw all precedent aside and then manufacture new standards and new conceptions of beauty out of whole cloth?

This is far from the truth, I think. Modern art and architecture are not concerned with looks, and do not care whether or not precedent is followed; nor are they concerned with any rules.

There is a general idea that a style must change after a certain length of time simply because it has become monotonous. Minor changes may be made for this reason, but the great changes, as the Greek and Gothic arts, were not made for this reason and our modern art is as great a step as either one of these. The desire for change or change for the sake of a change had little to do with our modern art.

At the time modern art was getting a start people were fairly content with things as they were. The antique business subscribes to this. Patronizing art was a comfortable pastime and rules and standards of beauty were well formulated. Yet it was at this time when everything seemed so secure in the world of art and architecture that the modern movement got its start. However, deep down art and architecture were in a rather bad way. A timid remonstrance that a table was rickety brought forth a remark that if such sacrifice could not be made to beauty, then it were better to be without a table at all. A person brave enough to insist that an article have some utility as well as beauty was frowned upon and put back in his place with the other low-brows. A mechanic would make a comfortable chair and the designer would promptly ruin it in the interest of art. A railroad company would try to build a station and the architect would set aside all the practical elements in order to satisfy his own theory of composition.

Take our own profession for instance. In the old days an architect might tell you that the symmetry and balance of a composition prevented your having a room of the size and character desired. He might even prevent your having doors and windows where they should have been for comfort for the same esthetic reasons.

Art had become pretentious but shallow, concerning itself only with externalities. It was against such conditions as this that modern architecture rose in revolt, not because old rules of composition or color had to go by the boards. Modern architecture involves a sincere attempt to be honest. A door is something to walk through, to open and shut, and is not the expression of some esthetic emotion. We try to be honest.

Modern architecture reverses beauty and utility. Utility now comes first and the practical parts of a problem are solved before art and beauty get a chance at it. When plain surfaces and colors take the place of elaborate carved forms and ornament, it is not because simplicity and color are the key-note of modern architecture, but rather

*An address delivered at the Institute of Architects, Spokane, Washington

because the other is too costly and out of proportion to the importance of the decoration on the building. Since there is a search for truth and honesty change in appearance is inevitable. The designer making use of new materials and new processes gets a new external expression in spite of himself. So we are becoming accustomed to modern music, modern painting, modern drama and even to modern women. Modern architecture is here and is being forced upon us whether we like it or not.

We are beginning to find the sharp angles that once disturbed us not at all illogical. Strange forms do not seem as eccentric as they once did, and pure geometric ornament has a value that we would never have thought possible just a few years ago. Already we admit to ourselves at least that we get more work out of a modern office building; we enjoy a play in a modern theater; eat in a modern restaurant; but a modern house—why?

A modern house is not a freak as many people think, any more than a modern office building is a freak. Although modern style suggests no style or period being followed, still such a house can bear certain evidence of some period or other. The house is modern first because its plan is developed to conform to the needs and requirements of those who are to live in it; secondly, because it reflects the character and personality of the owner and, third, and perhaps most important, it is constructed of modern materials used in their logical places.

TRADITION DISCARDED FOR MODERN DESIGN

By Sam T. DeRemer.

CONTRARY to the general opinion, modern design, or contemporary architecture, did not just recently come into being. It has been in the process of development some twenty years or more. True, it has just reached the zenith of perfection and is more or less generally accepted as being the modern style. When we speak of modern we don't mean that it is simply a passing fancy; it has taken too long in its inception. In any field of endeavor you will find individuals or parties devoting their efforts to the development of their interpretation of enlightenment as they see it. In religion, politics, government, et cetera, you will find liberals and extremists. Thus it is you will find these same groups in design.

It is here that I wish to point out the difference in our modern and modernistic design. In my opinion, the modernistic is the extremist interpretation, and being extreme, will be short lived, as the futuristic, cubistic and impressionistic styles in the field of art have been. It may be that the modernistic is an outgrowth of these types; it would appear to me that that is not the case, but rather that it is an outcropping of the extremist views over the modern, caused by the spirit of unrest which always comes into existence after a great crisis, such as the late war.

The interesting feature about this modern architecture is that it is international and not purely American, as is quite generally believed. It seems to have broken out throughout Europe as well as on this continent.

Some twenty years ago, an American architect, having won world-wide reputation, started something different in the way of architecture. Working with concrete as a medium, he proceeded to embellish the structural members of his buildings simply by making them more conspicuous and massive. The teachings of the old school which had become more or less orthodox were thrown aside. This could hardly be called extreme in the sense as we know it today, but enough different so that it was too much of a shock for this country. He went abroad, thinking if he could get his ideas approved by foreign peoples that he then could return to this country and sell them here, knowing that anything, however remotely associated with art, would have to have the foreign stamp of approval before it would be accepted in America.

His style was bold truth, being a series of etagiers as the French call it, or receding shelves, vertical lines being broken by the use of horizontal planes, all projections being at right angles to vertical planes. The cornice was not yet thrown into the discard. That was to come later. But his handling of it was different, simply pushing out a flat slab the two or three feet that was necessary and ornamenting it with a fine low relief.

But the eggs and darts were gone, the medallions were also missing, the architrave and entabliture were thrown into the ash can. Horrors, the old masters would turn in their graves. Sacreligious cried some, and

Excerpts from an address on "Modern Design" delivered at the annual meeting of the Grand Forks Builders' and Traders' Exchange. Mr. De Remer is associated with his father, Joseph Bell De Remer, president of the North Dakota Association of Architects, in the practice of architecture at Grand Forks.

others that the hallowed past was profaned with incongruities. And so it went.

Later, Europe along with the rest of the civilized world, turned out to be not so civilized, and things were thrown in chaos and in order that this great wrong might be righted the heads of the various governments decided to annihilate everybody living within the three-mile limit of this terrestial sphere, who didn't have a government job—for they would be needed to draft more laws. And they were nearly successful in this undertaking. After every great war there is a period of reconstruction and readjustment. People try to shake off the shackles of tradition with which they have been bound. There is no question but what our modern architecture experienced its growing pains at this time of rehabilitation. Artists and architects were quick to grasp the opportunity and the people willing to accept. Naturally, out of a melee such as this there would come bad with the good, but the big thing is that it was not all bad.

The people were dissatisfied and in quite a number of the European countries were revolting, revolting against the government which got them into this debacle. People fighting for freedom of expression, fighting against imperialistic governments, fighting for anything different than it was before.

With Europe well started on this new era, America was soon to follow. France, Germany, Austria, Holland, Denmark, Finland and the Scandinavian countries, I believe, are still ahead of us, with the exception of our skyscrapers, which are incomparable. That is, some of them are incomparable, and some are just as bad as it's possible to build them—big, cumbersome, ill-proportioned masses of junk, wherein the bricks can't even get along with each other.

Along with the spirit of freedom felt after the war, architects were further encouraged to break away from the old school by the development in the manufacture of new building materials. Architects' offices today are continuously flooded with literature and samples of new materials being developed so fast that were one to become thoroughly acquainted with them all, he would have time for nothing else.

I have spoken as if this new freedom had been accepted whole-heartedly and unanimously by members of the architectural profession. That is not the case. There is still much discussion. The dyed-in-the-wool conservatives who were schooled after the Roman classics, are not prone to accept this new type.

The more liberal and broad visioned are satisfied with answering their arguments by saying that the old styles are not in harmony with our present-day mode of living. For architecture is, after all, a reflection of our mode of living. Why should we wrap up our buildings, whose plans function of a necessity, with our present day activities which differ radically from those of centuries ago in an exterior resembling a Roman basilica when the building is to function as the New York Stock Exchange? Why top off a shaft of some twenty or more stories with a faithful copy of a Greek temple when on the inside, in place of ancient Greeks in flowing robes and sandals, we find a modern broadcasting studio where every hour of the day they are announcing between saxophone solos and bedtime stories, the instantaneous relief awaiting your tired, aching feet if you will use Savo?

In the nineteenth century any number of attempts were made for just this sort of freedom but were shortlived. Particularly after the Napoleonic wars this was true and now some of our veterans of the old academy are citing these cases as proof that our modern style will likewise be of short duration. But what reason outside of a few dissatisfied souls was there for these earlier attempts to be long lived. There had been no radical change, either in an industrial way or in their habits of living.

Facts alter cases. There is no getting around the fact that we are living different lives, in a different atmosphere, than we were even twenty years ago. In fact, the whole order of things has been accelerated, economic, industrial, social and even our modes of worship. A few years ago, if one trespassed one bit from the accepted ar-

rangement of church planning he had committed a gross sacrilege. The transcept and nave were as necessary as the roof, and the whole adorned with Gothic tracery, vaulted ceilings, groined and pointed arches. Today our method of worship is not individual but group, and in the main large groups. On restricted sites, and there are few which are not restricted, with a large congregation to seat at one time, the former type is impossible for many reasons, among them, the acoustical conditions are impossible. Also, it is necessary to have unobstructed vision. True, the cathedral type has been accepted for so long that the building itself seems to inspire a spirit of reverence, but might not some other type suitable to our present-day needs be successful in like manner.

After all this talk in favor of this new freedom, just what is our contemporary style? In as clear a conception as I can give, one who welcomes the opportunity of working in it, I would describe it as being a frank expression of unhampered individuality. One works with solids and voids, making no attempt to masquerade the structural features, on the contrary making the structural features function both for strength and beauty, abandoning the use of supercilious ornamentation in the shape of heavy cornices, belt courses and innumerable other jig saw embellishments scattered about over an unsuspecting facade as if from a salt and pepper shaker.

To make the picture complete it must have life. This is obtained by the use of very carefully selected materials, of which there is a wealth at hand, and this in turn painted, in the daytime by sunlight and shadow playing over the elevation and at night by appropriately colored flood lights.

A very important feature in the development of this new type and which is wholly American, is the set-back which is the result of recent zoning laws in our larger cities. This was originally conceived not to enhance the beauty of our modern skyscraper, but as a means of enabling the sunlight to reach the depths of the brick canyons of which the busy thoroughfares of the large cities remind us. This set-back has been found very useful in problems of design and as a consequence is being used not only on the skyscraper, but on lesser buildings as well. Great care must, however, be exercised where the set-back is to be used on smaller buildings, for one does not have the masses in the same proportion as on the larger or tower type and thus the set-back instead of being a thing of beauty becomes an ill conceived monstrosity.

Here is a graphic example of how the development of new building materials show their effect upon the design of buildings: in New York there is to be built a new sixty some stories skyscraper—the Palais de France, it will be called. It is being financed by the French government at a cost of approximately fifty million dollars. It will house the French embassy along with the arts and science allied with that nation. Irvin S. Channin, head of the Channin Construction Company, has just returned from France, and is quoted as saying that owing to the discovery of a new type of glass, which is made in either plate form or brick form, the upper seven stories of this building will probably be built of glass. This glass has not been on the market long enough to have reached standardization and mass production, so that there is little danger of the brick masons having to look for a new vocation as yet, but it bids fair to place the glass setter on an equal basis with the major crafts. It is the intention on the new Palais de France building to crystalize the face of this glass to reflect the sunlight rays like jewels. Imagine the beauty of this huge seven-story jewel, sixty stories above the sidewalk, and imagine the beauty at night, when it will be illuminated by thousands of many-colored lights. And imagine, too, what the tariff will be on a suite of offices in this quartz palace.

While we are speaking of sixty-story buildings let me get off my subject of design for a minute. How high are these skyscrapers likely to go? That is a subject of much debate at the present time. It seems that there are no physical limits. One hundred stories are already being talked of, and engineers would jump at the chance of a two hundred story job. But there are lim-

itations of other kinds, and as important as the physical. For example, there is an economic limit. Experts have studied with great diligence for years on what the economic height limit will be. It has been found that on a $200 a square foot site that the sixty-three story reaches the maximum economic return, while on a $400 a foot site, seventy-five stories have been found to be the most economical. There are other difficulties confronting the prospective builders of skyscrapers—heating, sanitation, wiring, corridors, stairways, elevators. The handling of vertical traffic is a big problem. The speed of elevators will have to be increased from 800 feet per minute which is the present legal speed to more than 1500 feet per minute, and it is doubtful if the human ear drum can stand the vibration in the enclosed cab at that rate of speed. Another thing which will give the elevator engineers something to think about is the tremendous weight and size of the cables in buildings approximating 2000 feet in height. Then, too, there is the dispatching of cars, both express and local, which will have to be double deckers to handle crowds, with the possibility of having to change from an express which operates between, say, the first fifty stories, to a local running from the fiftieth floor to the seventieth in order to get off at the sixty-third.

Another great problem will be to outline a schedule of routine agreeable to tenants and in mesh with the scheme of operating a smoothly running machine, which will have to synchronize perfectly. Think of the thousands of people tenanted in a building of 200 stories. A large city within itself. Then think of the additional thousands who will have to carry on business with the people having offices in this vertical city. Now, it would be a physical impossibility for all these people to come in or go out at the same time. Even if the stairs, corridors and elevators would handle the crowds, there would not be room on the ground floor for entrances sufficient to pass this mob. It would be like pouring water out of a large bottle when turned upside down; it becomes air bound. This would necessitate streets at different levels from which those who would go to the ninety-second floor would enter on, say, D level, and those going to the one hundred and tenth floor would find entrance on some other level.

If, on the other hand, all these people have to find entrance on the ground floor, then, as I said, a system of routine will have to be followed similar to this: Those in a certain part of the building, on floors approximating the same levels, will have to be in their offices at seven in the morning, and will lunch at ten-thirty or eleven, those in another portion will go to work at eight and lunch at noon, and those in still another strata will start the day off with the bankers at nine o'clock, and lunch at one, and so on, adfinitum. Now, maybe the tenants might not like this arrangement. The commuters, would, I am sure, insist on a nine o'clock lease, inasmuch as they already have to rise an hour or so earlier than the urbanites, but just try to get a New Yorker in his office before nine. I am afraid that this would be more of a stumbling block than the engineering difficulties. It might be necessary to change the working hours of the day from nine in the morning to five for one shift and ten to six and eleven to seven for succeeding relays.

With a "paying height" pretty much established and engineering problems in competent hands, the remaining important factor is what part design or art has on the attractiveness to tenants of one building, in comparison with its competitor across the street or around the corner. Design does play an important part and its influence is bound to increase as competition among building owners increases.

People today are taking more interest in the things which surround them than ever before in the history of the country, and will be no more content to work in drab business quarters than to live in poorly furnished and inartistic homes. It is certain that a prospective owner cannot hope to realize a maximum return on his investment, if he does not insist upon beautifully designed, well proportioned facades, pleasing to the eye of a well informed public, along with a well planned interior which functions.

THE COLOR APPEAL OF MARBLE

By E.C. Porter

INGRAINED in the human race is a definite love for color; for the rich, harmonious effects that may be attained with combinations of shades intended to satisfy tastes and culture of people in various states of society. Periods of joyous color have alternated with periods of more or less coldness and severity of decoration. Even within our own history these color cycles as applied to architecture particularly, have shown very marked changes. The pure whites and neutral tints of colonial times gradually gave way to the richer effects of the Victorian style. Again the tide ran out in favor of cooler shades and for the past two or three decades bright treatments have been kept in abeyance.

But our architectural complexion is again undergoing a marked transformation; one which discards the once familiar dull, weather-beaten countenance for the well-groomed, attractiveness of skillfully applied color. The idea of beauty in all things is becoming a powerful factor in determining the future progress of this increasingly mechanical era. Stimulated by new discoveries and aided by scientific research, this quest for beauty gives every promise of exceeding anything yet known in history. New buildings find it expedient to dress in gayer attire or be hopelessly neglected as architectural wall flowers, so to speak.

Always the builder has found much satisfaction in working with marble. The effects gained by its use are practically unlimited, so wide is the gamut of colors on the market from which he may choose. It is interesting to reflect that even in the time of Ruskin the range of tinted marbles offered great possibilities to the color stylist, although such varieties do not appear to have been utilized to any great extent, as this author frequently deplores. One of his passages illuminates the possibilities contained in colored varieties of that period:

MONUMENT TO MUSIC, PROVIDENCE, R. I.

*The author is Pacific Coast Manager, Vermont Marble Company, San Francisco.

POST OFFICE BUILDING, DENVER, COLORADO
Tracy, Swartwout & Litchfield, Architects

MAIN BANKING ROOM, CROCKER FIRST NATIONAL BANK, SAN FRANCISCO
Willis Polk & Company, Architects

"The true colors of architecture are those of natural stone, and I would fain see these taken advantage of to the full. Every variety of hue, from pale yellow to purple, passing through orange, red, and brown, is entirely at our command; nearly every kind of green and gray is obtainable; and with these, and pure white, what harmonies might we not achieve? Of stained and variegated stone, the quantity is unlimited, the kinds innumerable."

Formerly very little marble was employed outside of ecclesiastical and monumental structures. Its general use was prohibited no doubt by the relatively high cost of production and transportation. One can imagine the vast amount of labor necessary to quarry, cut and polish a single slab of marble by hand methods, and the difficulties were increased when it came to preparing some of the colored brecciated varieties. Only the state, church and very wealthy citizens could afford such a luxury; consequently there never developed an appreciable demand for marble in domestic architecture or commercial buildings. But the world has moved on, the status of practically all social elements has vastly improved, wealth has greatly increased due to intelligent application of mechanical invention, and in this twentieth century the demand for marble threatens to outstrip the supply. And all this despite the fact that quarries and finishing plants are thoroughly mechanized, making it possible to produce in a few days what formerly would have required months of grievious toil to accomplish.

This growing preference for marble in practically all colors from white to black has prompted American marble producers to make a continual search for new deposits heretofore unworked or undiscovered, and in some cases to reopen old, abandoned quarries whose products formerly found little demand in the market. Parallel with the exploration for new varieties, constant efforts are being made to develop more scientifically and completely those quarries that have already proven their worth. Probably no marble belt in the country has received the development that has been going on for nearly a hundred years in the Vermont region. The entire length of the state is dotted with workings old and new, and the result of the extended exploitation shows that more than half a hundred different varieties of salable marble are produced. How many more are lying in wait for the prospector is a fascinating conjecture although it must be tempered with the realization that every new opening means a comparatively greater expenditure of capital before good marble is reached, as any experienced quarryman can testify.

Undoubtedly the most renowned marble deposit in Ameria, if not in the world, is at West Rutland, Vt., where more than fifteen varieties are produced from a single vein. Here, in vast underground tunnels 2,000 feet in length are found excellent white statuary marble, bright green and white mottled combinations, beautiful salmon-tinted creams flecked and striped with green, deeper greens of closely woven mottlings, and lastly a bluish shade. Between them range other varieties having individual characteristics. Nature packed a lavish assortment to choose from in these rich beds whose rugged outcroppings broke through the valley floor sufficiently to reveal their hidden wealth to the old quarryman who first worked them. Northward along the Otter Creek Valley are many other quarries which furnish mainly white, or bluish white, and gray toned varieties. Then, to the south, are those spectacular Danby quarries, high above the valley on the mountain side, producing a remarkably hard, resistant white marble, some of it running almost clear white and some having several shades of veining. The problem of accessibility, which so frequently hinders or prevents altogether the production of good marble, is well illustrated here. In order to remove the blocks, a cable road was laid from the railroad in the valley straight up the mountain — a distance of one mile. Over this road the blocks ride down on cars operated by steel cables. These quarries gained considerable fame by supplying the marble for the Arlington Memorial Amphitheatre.

Marbles of higher color are found in the

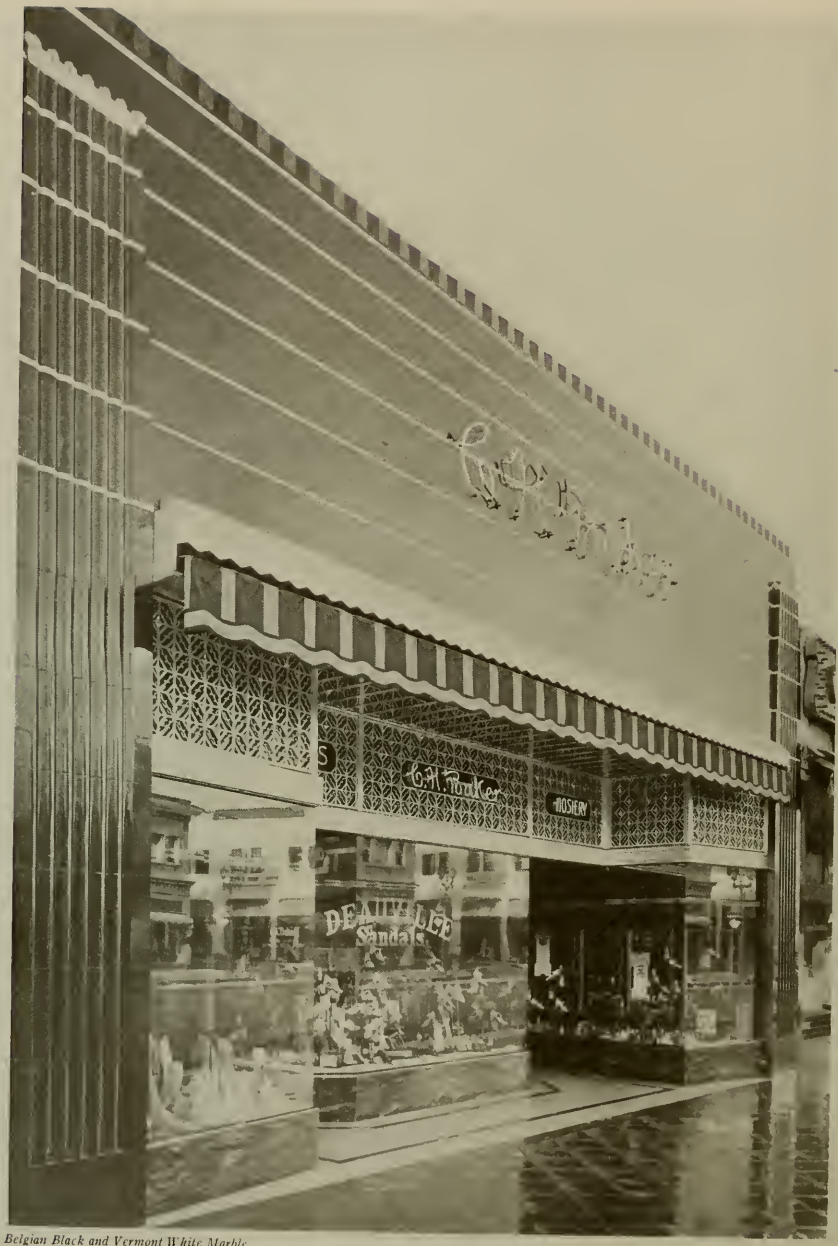
Royal Antique Marble by Vermont Marble Company

MANTEL IN LOBBY OF NORTHERN HOTEL, BILLINGS, MONTANA

LINKE & HAIRE, ARCHITECTS

ROTUNDA, WASHINGTON STATE CAPITOL, SEATTLE, WASHINGTON

WILDER & WHITE, ARCHITECTS; BEBB & GOULD, ASSOCIATES



Belgian Black and Vermont White Marble

STORE FOR C. H. BAKER, HOLLYWOOD, CALIFORNIA

MYRON HUNT AND H. C. CHAMBERS, ARCHITECTS

central and northern regions of the state. Verde Antique is very well known in the building field; its dark green, streaked with white markings, has proved immensely effective either alone or in combination with other marbles. Special machinery is necessary to quarry and finish Verde Antique on account of its extreme hardness. In the region of Lake Champlain are deposits of richly colored marbles of several shades. These include the reds which are known under such trade names as Jasper, Oriental, Olive, Lyonaise and Royal Red. Good grades of black and mottled grays are produced in the islands of Lake Champlain, while on the New York side near Plattsburg is a pink blend known as Pink Lepanto. These latter varieties are largely fossiliferous in structure.

While the search for new marbles has been more concentrated probably in all of the eastern states from Vermont to Florida, prospectors by no means have left untouched sections of the country further west. The mountains of Colorado contain large deposits which have received some development, mainly at the town of Marble. Yule Colorado marble is a beautiful white to gray material, very hard and of exceptional purity, much of it having a narrow, light golden vein which crosses the slabs in parallel lines. This stone is very suitable for exterior as well as interior purposes, one of its most notable installations being the main structure of the Lincoln Memorial, at Washington. Even in far away Alaska the quest for marble goes on with unabated fervor. These Alaska quarries produce marble quite unlike any other kind, especially the Gravina which is distinguished by a striking network of sharp black markings in a light gray clouded background. There are also some colored varieties here more or less brecciated in character. Alaska marbles have proved extremely attractive for interior decoration and they have been used throughout the country, especially on the Pacific Coast.

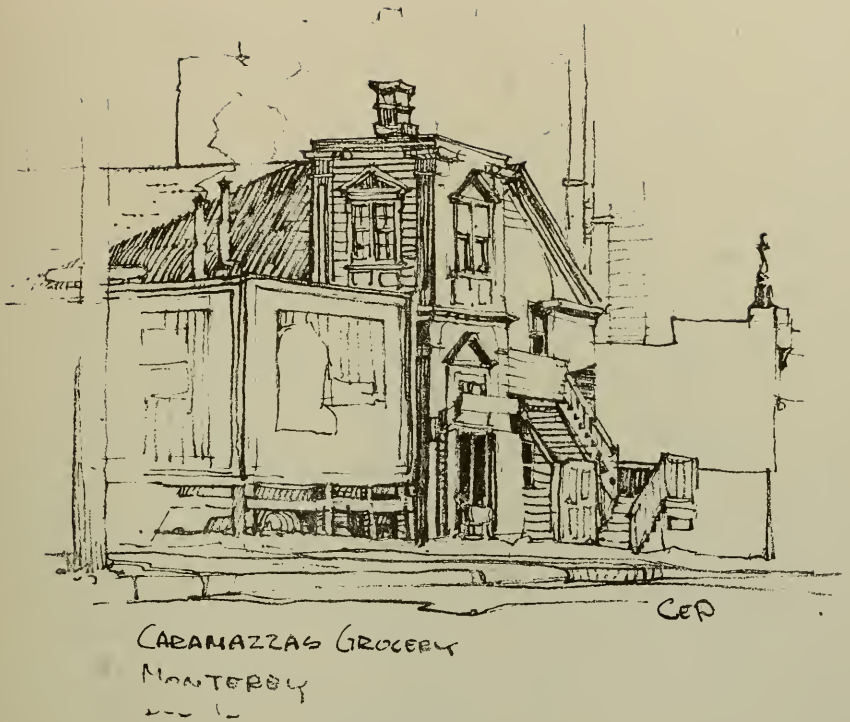
No stone is left unturned — perhaps it might be said more literally no outcropping ledge is passed by untested — in the hope of finding new and more beautiful marbles to meet the demand that is constantly developing as we learn to use more and more the inimitable colors nature has provided for us. Only with the past year a new prospect has been opened up in the state of Montana, a deposit which yields a very attractive black and gold marble similar to the Black and Gold quarried in Europe. Quite likely before many years pass other fields will have come into operation to add new color combinations to our lengthening list of American decorative marbles.

Color is now being used where only a few years ago it was not even considered. No bank, hotel, municipal hall, or great office building is thought complete without its marble, either for the exterior or interior. This is equally true of the modern home. Today marble is brought into the color schemes of private residences everywhere. Perhaps there is no better indication of the appreciation accorded marble by the general public than its extensive application to the modest home. It lends desirable tone and richness to entrance halls, sun parlors, bathrooms, mantels, radiator coverings, and is applied in many ingenious ways to gardens and other exterior work. In a new residence just completed near Santa Barbara, California, one of many pleasing features is a bathroom in which all the built in fixtures were manufactured from marble. They include soap dishes, glass holder, paper holder and various sets of towel bar brackets. Another bathroom in a San Francisco residence contains a tub cut from a solid block of marble, also lavatory and floor of the same material.

Undoubtedly there is an indefinable fascination about marble that appeals to the human race. Perhaps it is largely due to a remarkable versatility of uses; no other material seems to lend itself in quite the same way to the expression of beauty in color. The beauties of marble lie in its texture and "life" which are accountable for its crystalline formation, its translucence, its richness and depth of color. These colors never apply only to the surface, but penetrate the entire body of the stone. They are natural, and therefore contain unmeasured capacities from the standpoint of harmony.

NEW PLANT AND SALESROOMS OF THE MEYBERG COMPANY, LOS ANGELES

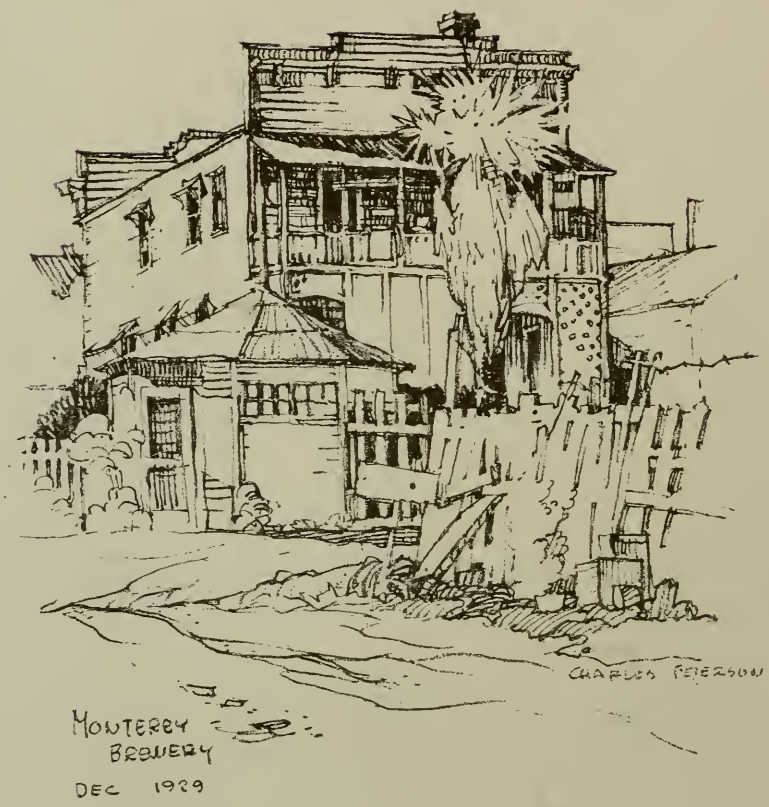
The conservative modern in architecture as applied to the smaller building is exemplified in the four-story structure of The Meyberg Company, Los Angeles. This building has been designed to meet the particular requirements of their business, that of making as well as displaying, special lighting fixtures.



GRAPHITE

DRAWINGS AND PAINTINGS
FROM MONTEREY COUNTY

BY CHARLES E. PETERSON

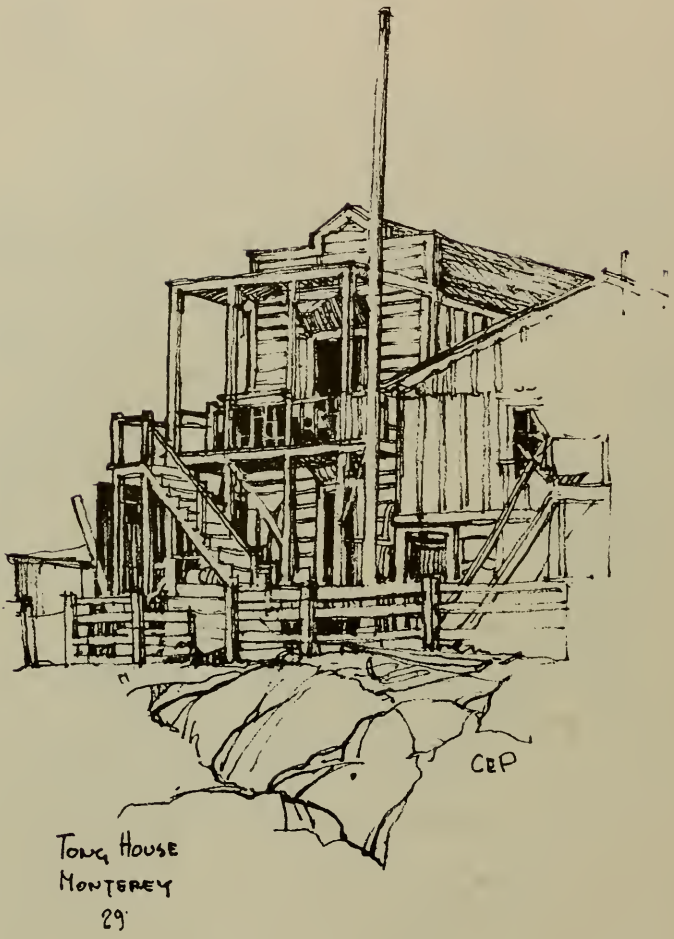


GRAPHITE

SAN CARLOS CHURCH
MONTEREY

29

PENCIL SKETCH



GRAPHITE

Haystack, Rancho Del Monte

WATER COLOR

Artichoke Ranch near Monterey

WATER COLOR

THE MODERN INTERIOR

By John F. Harbeson in Pencil Points

INTERIOR architecture has always been less formal than exterior: there is less expression of the structural members or processes, which are usually concealed so as to make an interior comfortable, convenient for use, and easy to keep in order. Designers have frequently used the orders in interiors, often in the standardized stone proportions, as shown by the work of the Adam brothers, and in such widely used books on design as the *Recueil* of de Neufforge. But there have always been those—especially at school judgments—who object, for instance, to the use of a pediment in an interior, even when used decoratively, as being entirely out of place because that form originated as a roof to shed water.

Certain schools of modern thought, objecting to all "useless" forms, including forms intended purely for decoration, believe in simplicity at all costs. Some, like Le Corbusier, are quite willing, in some of their interiors, to have steam-pipes enter and leave a room unconcealed, in much the same fashion as on the ocean liner of a few years ago (before the days of such boats as the *Ile-de-France*).

Designers of this school eschew mouldings, care for few, if any, pictures, and prefer furniture of flat surfaces and strong lines in which "sentimental" mouldings, as they term them, are avoided, and panelling also, "in order to gain the effect of extreme and severe simplicity."

But not all modern designers subscribe to this simplicity; in the design of the interior as well as of the exterior, there are a number of different movements of the modern. Those who have always been interested in ornament, and are skillful in the use of ornamentation, are irked by the principles of functionalism, of severe simplicity. For them the "modern" is simply a different "style" in which new forms are used as elements of composition. These designers often use as much ornament as was used in the past—as much sometimes as is found in florid examples of Louis XV style. The ornament is of a different kind, based on chevrons, triangles, or other geometric forms, on magnified plant forms, on forms of primitive art—forms that have developed from modern science or the mechanistic viewpoint of today.

Some modern work is "modern" only in the type of ornamentation, and if this were replaced by the ornamentation of fifteen years ago, the work would not be modern. In other words, the work is not modern in any real sense, but is dressed in the clothing of the present fashion.

If the last generation used documents scrupulously, and often ended by making "period architecture," this generation uses documents omnivorously, voraciously, with no thought of attempting re-creation, with no desire for period archaeology. Sometimes the thoughts so gained are well-digested, assimilated, and reappear with a new coating of the personality of the designer, so that though individual ideas may have been taken from Swiss peasant work, from negro art, from machinery, from Italian architecture, or what you will, there is a certain unity of scale, of method of handling material, by means of which the designer weaves this material into one creation.

To be able to use ideas in this way, to harmonize thoughts into a unified composition, is a great gift, and few there are who have it. Most designers are not able to assimilate dissimilar ideas and pass them through the factory of their own minds and turn them out as a homogeneous product; these, wanting to be modern, take thoughts of different kinds, ideas from different documents, with different "scales," with nothing, in fact, in common, and make them lie as bedfellows, and the result is more often than not painful to the eyes of the beholder.

A number of Germans made use of un-

usual documents and did work that was quite "modern" in spirit ten or more years before the war. Ludwig Hoffman, Bruno Paul, Peter Behrens, Otto Wagner, and others made a study of the Italian Renaissance, but sought picturesque variants of the art of that time, rather than copying, carefully, the accepted "best examples." But it was the Exposition of Decorative Arts in Paris in 1925 that brought the movement forcibly to the attention of America through the great number of American travellers who there saw, for the first time, an art entirely new to them.

The modern style is based on all previous knowledge, and draws where it will from all sources of inspiration, whereas the art of former times had little (comparatively) besides its own past to draw upon. The enormous increase in the number of books published, the improvement in illustration, in photography, has placed the entire storehouse of knowledge before the modern designer. Books on primitive art, on the peasant art of every country, scientific books, books of microsopic photographs, photographs of machinery taken by artists who there discovered a field worthy of their talent, are all spread before the designer looking for "an idea"; and designers have always been looking for ideas. We have now an embarrassment of riches, too many documents; and unfortunately some believe that if they do something that is "different" (or something for which the document is not generally known) the result is modern —and good.

As the new work becomes more familiar to the average eye the merit of mere strangeness will evaporate and work will be judged, as of old, on its intrinsic values.

We have said that in the theory of modern thinkers a room should be simple: and the smaller the room, the simpler should be the architecture of the room, for this is like the setting on the stage—"a setting too elaborate and too striking in color and design would immediately take the attention away from the actors and the lines in the play."* Too often these actors, though a part of the final composition, are not considered as an element in the study.

*"*New Dimensions*," by P. T. Frankl.*

There are two parts of any interior: the stationary part—the walls, with their doors and windows, the floor, and the ceiling—and the movable part, consisting of the furniture, the hangings, the draperies, lighting fixtures, and the small objects, and the people, without which the room does not fulfill its function.

For a small room the ideal foundation is a plain flooring of quiet color—a vulcanized wood floor, or a plain carpeting in gray, taupe, or black. There are, of course, "modern" carpets of intricate geometric design in contrasting colors, interesting in themselves as pieces of design, but usually ruinous in a room, and much too evident to fit into any composition in the subordinate place that the down-trodden floor must naturally remain in.

The ceiling should be plain, of tone and color lighter than the walls. A dark ceiling is apt to make a room look lower, a light ceiling higher, than it really is. While there are chandeliers in the "modern" style, made by applying new decorative forms to an old appliance, lighting in the modern spirit is, as much as possible, concealed, or flush with wall or ceiling, or is part of the movable furniture.

If the floor and ceiling are thus plain, it is on the walls that most attention is directed. Design is partly a question of form, proportion, and scale, and partly a question of material. As the form is simple in the modern interior, the material plays an important role. The texture of a plaster wall is worthy of study; the veining of marble may in itself be a rich decoration of an unobtrusive kind; polished or waxed surfaces and the choice of stuffs and textiles assume importance. The commercial penetration into hitherto little known parts of Asia, Africa, and the islands of the sea, has brought into the market a number of new woods with interesting burls and figures, available in veneer for wall coverings and for furniture. The rich figurings of zebrawood, tuyha wood, and macassar-ebony, to mention but a few, give to the plain surfaces of modern design a new interest, without any attempt at "ornamentation," as we usually term it.

ENGINEERING

and

CONSTRUCTION

PARDEE DAM, 358 FEET HIGH AND 1347 FEET WIDE

(Note Power House at Foot equivalent
to Five Story Building)

The Pardee Dam, East Bay Municipal Utility District

Highest Gravity Type Concrete Structure of its kind in the world

SITE OF PARDEE DAM ON THE MOKELUMNE RIVER, BEFORE CONSTRUCTION WAS STARTED

THE PARDEE DAM

CALIFORNIA engineers and architects recently paid a visit to the East Bay Municipal Utility District's source of water supply at the lower end of the Mokelumne River in the Sierra Nevada foothills. They were well repaid for their journey. The Pardee dam and reservoir proved points of interest without parallel in Northern California engineering achievement.

The Pardee dam is named in honor of Dr. George C. Pardee, former Governor of California. One of the largest of its kind, the dam is of 358 feet maximum height, 1347 feet crest length, and contains over 615,000 cubic yards of concrete. The roadway across its crest is 575 feet above sea level.

Pardee dam is of the curved gravity type. Its abutments are imbedded deeply into the adjoining canyon walls. In preparing the foundation, 153,000 cubic yards of rock and over-burden were removed.

From the day in September, 1925, when Lynn S. Atkinson of the Atkinson Construction Company signed the contract as successful bidder, the problem was to produce and place concrete on a quantity basis which would net a profit in spite of low unit prices.

The aggregate was obtainable from tailings of placer mining, four miles down the Mokelumne River. Gravel was excavated by a large dragline and transported on cars to the base of the washing tower. There it was elevated on a belt conveyor. It descended through screens in the tower and was washed during the process, being separated into sand, gravel and cobbles—the oversize stones going back to a crusher. Sand, gravel and cobbles were transported by the four-mile overhead tramway from gravel pit to dam site, and deposited in large bins.

The success of the constructon program was in a large part due to the success of the 18,700-foot direct aerial tramway. Its maximum usefulness came during August and September, 1928, when concrete delivery to the dam reached more than 67,000 cubic yards per month. The tramway was designed for a capacity of 440,000 lbs. of gravel, or 146.7 buckets, per hour. During the 79-day period from August 1 to October 19, it operated 235 shifts and transported 232,812 buckets of material from washing plant to bunkers at the dam site.

Cement was brought in by rail to the mixer plant at the dam site, a five-mile branch line having been constructed by the contractor. It was received in cloth sacks and dumped from them by hand on an 18-inch conveyor belt which carried it to the head of the cement silo. This latter provided storage for 15,000 sacks of cement. Cement was stored in the silo only to a depth of 30 feet. By means of screw conveyors, the cement was conveyed to the four 12-sack weighing cement batchers, one located above each mixer hopper. The cement was weighed and discharged by hand into the hopper along with the three sizes of aggregate.

The concrete materials were mixed in four electrically driven drum mixers. Actual mixing time of 1½ minutes was required. The mixers tilted into discharge chutes which converged to a control hopper located on the hillside below the plant.

GATE DETAIL PARDEE DAM
Arthur P. Davis, Chief Engineer

PROGRESS WORK ON PARDEE DAM BY ARTIFICIAL ILLUMINATION

The control hopper discharged through a manually controlled radial gate into a concrete chute, sloped on a 40 per cent grade to the base of the main concrete tower.

Inundation of the sand was not practiced, but daily moisture determinations were made and the proper amount of water to be added was then calculated. To fix the total water, slump tests were made, but much dependence was placed on the appearance and consistency of the concrete as it arrived at the dam. Water was measured into the mixers by using water meters equipped with dials having turn-back pointers, so that the water for each batch was directly indicated and at the same time a summation or total could be read from the dial. This permitted the checking of the total quantity of water used against the total number of batches placed.

The freshly mixed materials flowed through the main concrete chute to a hopper located near the bottom of a two-compartment main concrete tower. From there it was hoisted in 2-yard tilting skip buckets, operated by electric hoists to elevated hoppers attached to the tower, whence it passed by gravity through hanging counter-balanced troughs, or chutes, to tremie spouts, locally known as "elephant trunks," through which it dropped to the dam. A 10-ton "high line" or cableway was an essential part of the placing equipment. It had a span of 1280 feet across the gorge.

The concrete was placed in blocks between contraction joints located on radial lines of the dam. All contraction joints were recessed and were provided with vertical grout holes spaced 10 feet. In placing concrete, pours were made to depths of 5 feet. It was the general practice to pour on the two night shifts each day, beginning at 4 P. M. and ending at 8 o'clock the next morning. Between 8 A. M. and 4 P. M. time was available for the clean-up of the surface-placing forms and other necessary operations.

At times three-shift placing of concrete with practically continuous depositing was resorted to. By moving the "elephant trunks" from which the concrete spouted at frequent intervals, excessive flow of the concrete was avoided. A placing crew of 15 men worked over the concrete as it was poured under the direction of an inspector.

The dam design called for concrete with 1500 - lb. - per - square - inch compressive strength in 28 days. At the completion of the dam, and after all concrete had been placed, average 28-day strengths amounted to 2885 lbs. per square inch. The concrete mixture contained an average of 1 bbl. of Calaveras cement per cu. yd. More than 3,000,000 sacks were used.

On October 19, 1929, the contractors interested in the construction and furnishing of materials for the dam held a banquet on the crest of the structure. Governor C. C. Young was present and gave the dedicatory address. Ex-Governor Pardee, after whom the dam was named, was present and made an address, as did some of the other principal officers of the District and of the Atkinson Construction Company, the builders.

The dam itself was entirely completed at the time of the dedication, as was also the power house at the base of the dam. Since that time the machinery has been installed in the power house and the plant will be ready to operate within a short time. It has an installed capacity of 15,000 kilowatts and will be operated by surplus flood water and the water that is released from the reservoir for the use of prior appropriators and riparian owners on the Mokelumne River below the dam.

At the time of the dedication of the dam, the outlet tower controlling the water from the reservoir into the aqueduct leading to the East Bay Municipal Utility District was under construction. This structure has now been completed and is in use in admitting water into the East Bay aqueduct.

The filling of the Pardee Reservoir for the use of the East Bay Municipal Utility District was begun on December 8 and the water in the reservoir has been gradually rising until the head against the dam at present is 275 feet, or nearly 90,000 acre feet of water. There is also sufficient snow in the drainage area on the upper reaches of the Mokelumne River to completely fill the reservoir before the end of this runoff season.

CLOSE-UP OF PARDEE DAM UNDER CONSTRUCTION

FALSEWORK DESIGN FOR CONCRETE STRUCTURES

By W. C. Hogoboom

ENGINEERS and contractors engaged in the design and construction of reinforced concrete slab and girder bridges will be interested in a system of falsework which in many cases should result in considerable saving in the cost of erecting such structures.

Falsework Design, as this system is called, is a device for supporting construction falsework from permanent columns or piers without the use of any temporary uprights. It consists of providing the columns or piers with bolt holes or embedded bolts, for future connection with structural steel members—either angles or channels—which in turn support the centering members upon which the forms are placed. These centering members may be timber beams if the span is small. For greater spans, structural steel beams are more economical, and as no holes are required to be punched in these beams and they are not altered or injured in any way, they are as good as new at the completion of the job and their salvage value is high. Where a bridge contains a considerable number of

equal spans, these beams may be used several times during the erection of the one bridge.

Instead of being carried by structural steel members temporarily bolted to the permanent columns or piers as described, the wooden or steel beams which act as centering members may be supported on shelves or ledges of concrete which are integral parts of the piers or columns, or recesses may be left in the piers to receive these centering members. The idea covered by the patent is that of carrying the entire weight of the forms and the concrete which is placed in them, to the permanent piers or columns, instead of to the ground through a system of temporary timber falsework as formerly. "Falsework Design" is patented by M. Hirschthal of New York, Concrete Engineer for the Delaware, Lackawanna and Western Railroad Company.

As applied to reinforced concrete bridge construction, Falsework Design eliminates all upright timber supports, as well as any piles which might be required to support such uprights where the ground or stream bed is too soft to carry the weight transmitted by the ordinary falsework. This results in a substantial saving in both labor and material, particularly where the bridge deck is twenty feet or more above the ground surface. Where the height is greater, the saving is proportionately more, as with Falsework Design the cost is practically independent of the height, while with ordinary falsework the cost increases directly with the height.

In addition to a direct saving in cost of erection, Falsework Design also removes some of the hazards usually connected with ordinary timber falsework. For the portions of a bridge which cross a stream or stream bed, the elimination of the upright timber supports between piers, excludes the usual risk of having the falsework carried away by an unexpected flow of water, with the resultant collapse of the concrete structure and the heavy loss which would follow. The danger of unequal settlement of the forms is also removed.

With long bridges or viaducts, many of the approach spans cross areas which it is necessary or desirable to keep open. This is especially true on grade separation projects or where viaducts cross railroad tracks over which trains must be run every day. By using Falsework Design, the ground space between piers is left clear for passage of traffic, storage of materials or for other valuable use. This may result in some cases in an indirect saving fully as great as the more obvious direct saving in the actual cost of supporting the forms.

Falsework Design may also be used to advantage in the erection of reinforced concrete buildings. By having the floor beams and slabs and their forms supported directly at the top of the columns, all the space beneath is left clear, giving free movement to workmen or allowing any use which may be desired. In addition to this advantage, each floor is independent of those above or below it. When any given floor has set, the forms may be stripped off, as the floor is not carrying falsework loads from floors above as with ordinary falsework.

Falsework Design is being used on several large bridge projects in the East at the present time. One of these was described in the November 15th, 1928 issue of *Engineering News-Record*. On another smaller bridge built a few years ago in New Jersey, the contractor stated that the use of Falsework Design saved him about $6,000.00 and three months time. The total contract price on this job was only about $70,000.00, so that the percentage of saving achieved by using Falsework Design is remarkably high.

If desired, a complete system of falsework for any project will be designed to fit the particular conditions. However, if the contractor prefers to have his own staff design the falsework, he may do so. Permission to use Falsework Design may be secured by payment of a small royalty based upon the area of the floor space for which it is used.

MORRIS BANK BUILDING

A one story Class A bank building to cost $100,000 is to be built on the south side of Market Street, near Third, San Francisco, by the Boyd Estate. The lessees are the Morris Plan Bank, and the builders are Barrett & Hilp.

The ARCHITECT'S VIEWPOINT

¶ *The Institute Considers "Modernism"*

¶ *Architects Become Writers*

¶ *It Pays to Advertise*

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EVEN our own serenely conservative American Institute of Architects is to take notice of "modernism." Knowing that "a little leaven leaveneth the whole lump" it is recognized that the present day architectural stir means that there is certainly even "more than a little" leaven! Modernism, then is to be our theme at Washington, in May, when Washington, the city (not the Senate, House or officialdom,) is itself a wakened, vibrant, annually *new* world.

We talk of Modernism.

What, anyway, is "Modern"? "Time," says an eminent scientist, "has perfect symmetry in relation to the moment; in effect there is neither Past nor Future." And, says a philosopher-poet, "Time is the clicking of a clock."

The more concise term "Arquitectura de la Epoca" used by the columnist of a Montevideo professional journal appeals to me more than "Modern Architecture." "Of the Epoch!" and while the monuments "of the epoch" may not all be "epochal," at least they tell their current story—good, bad, mediocre—telling it sometimes exceedingly well!

All true architecture is now—and always has been at its moment, "Modern." Live issues make it so. And the interpretations of the more distinctive problems create their own forms. It is mainly forms and systems that count. Not trick or detail!

As language is not *thought* but merely the means to *expression* of thought, so detail is not architecture! Are these "new" forms going to evoke what shall prove to be a vocabulary, or, like ephemeral college slang, merely vernacular?

Our attitudes will affect our impressions, as a critic has observed.

"There are those who wrap themselves enthusiastically around a new ideal for no other reason than that it is new. Again, there are those who have only to know an idea is new to dislike it and fight it on sight. The progress of modern art has been retarded because of both of these types, for ardor without restraint of discrimination and good taste is as detrimental to healthy development of an idea as the blighting effects of sterile discouragement. Just the same, the new expression in art refuses to wither and those who oppose modern art will have to save their crepe and their lilies for some other idea with less vitality and less reason for being."

One building within the writer's ken contains elements (of detail) in varying degrees of remoteness derivated from such varied sources as the Parthenon and Chartres Cathedral—from China, India and Java—from a rug of Persia and broidery of Bokara—with ventures into the realm of abstract form—just to give full catholicity. Why not? *Tout le Passetous pays!*—are they not ours for inspiration and, still more important, for alchemy?

* * *

CONFIDENTLY Robert Browning wrote: "Raphael made a century of sonnets"—and of course the prosaic fact seekers ask for proofs. Those of us who live near to or within the rim of the vivid world which was Raphael's—and Browning's—ask no proofs of our intuitions, desires and endeavors. Doubtless Raphael *did* make sonnets—

or perhaps lyrics! Many artists do essay and some achieve poetry; for form and rythm, the structure by which poetry presents Beauty observed, are likewise the structures of the other arts. We know architects who *do* write, and publish, and whose writings are appreciatively read.

William J. Locke tells stories for a numerous public, and seems to tell them entertainingly. But it was the architect-poet in him, of an earlier day, who wrote of a distant view of Mogador, on the Morocco coast: "The town rose on the horizon, a dream city of pure snow . . . and the lazy sea lay at the city's feet a pavement of lapis lazuli." And it was during his secretaryship of the Royal Institute of British Architects that Locke wrote "At the Gate of Samaria" (his first and best told story) . . .and created Paragot, his best portrayed character—"The Beloved Vagabond" of his imagining . . . who was by the way, an architect!

Kenneth Grahame, not an architect, but writing to relieve the tedium of Bank of England clerking. When the ledger weighted his body down to a high stool, he set his soul traveling. So his "Wind in the Willows," with its whimsical characters of the Water Rat, Badger, and the rest, gives us the chance "meeting up" with the world-wise Sea Rat, who relates how he set forth on his stow-away to England; "Outbound from Constantinople, by classic seas where every wave throbs with a deathless memory, to the Grecian Islands and the Levant. Those were golden days and balmy nights! In and out of harbour all the time—old friends everywhere—sleeping in some cool temple or ruined cistern during the heat of the day—feasting and song after sundown, under great stars set in a velvet sky."

Ralph Adams Cram voyages in the same seas as did Grahame, not deep in the reeking hold of a "small trading vessel outbound from Constantinople" but as the fortunate guest aboard a gleaming white yacht. May he have given his host, every day, something of the pleasure that, since returning, he has given his readers. Read his recently published "White Magic" if you have not already. It tells of their rewarded quest for "White Cities."

"I can tell only of some of the white things seen on cruising over the seas and along the lands where Minoan ships and Egyptian, Phoenician and Carthaginian, Greek and Roman, Byzantine and Frank and Venetian and Moslem, cut the blue waters and contended with the wild winds in ceaseless and tangled traffic."—"It was the marble island of Paros that began to weave the white magic of white cities." . . . "as the yacht — a white city in itself—steamed slowly into the little harbor of Paroechia compensation and more, revealed itself, for all along the sea rose a slender town, whiter than the snow crown of Helicon, silhouetted against the Parian peak, and bubbling into little white domes on and around its old acropolis. A white town in the midst of golden vineyards and orchards of orange and pomegranate, with the blue sea below and the blue mountain peak rising behind. The whiteness of a life that may have forgotten Hellas and its Parian symbol of white life, but had not known the drabness and the mark of the culture of coal and iron and all that they imply. Yes, one could live there well in the white lights and the blue shadows and the golden gleams of vine leaves." . . .

"I do not know the secret of this white magic that still lingers in these enclaves and islands and hidden places of the old East that saw the birth of the human world we know. It is more than what the eye sees, more than the joy of something clean and utterly pure . . . we know little enough of the Beatific Vision, but one thing we can safely assume and that is that it has that perfect whiteness that has its pale simulacrum in the white cities of the Aegean Sea."

And now—not least—we come to our own John Galen Howard, who has always observed interpretively, thought clearly and drawn beautifully—in picture, *projet* and in words. More than once we have read his pen presentations of men—artists all—in their

[Please turn to next page, second column]

EDITORIAL CHAT

IT is the pleasure of THE ARCHITECT AND ENGINEER to present to its readers in this issue the work of the San Francisco Third Decorative Arts Show. The editors feel that this is perhaps the outstanding exhibition of its type that has been held in America. The movement of holding a modern art show had its inception perhaps in New York where Maclyn and Lord and Taylor, department stores, and the Metropolitan Museum, have had similar shows. In San Francisco two years ago Hale Brothers Store produced a small show devoted largely to furniture, painting and art objects.

To the San Francisco Society of Women Artists goes the credit and congratulations for producing this third annual exhibition in the Women's City Club in San Francisco. Their purpose, one to which they have devoted considerable effort and money, is to present the work of artists to the public; to elevate the taste of the public; to make it conscious of the presence in this community of a large (or small) group of artists who can create any decorative work of art.

All work shown is juried and must be the creation of the artist presenting it. It may comprise any work or medium which has personal or intimate use as differentiated from industrial or purely commercial use.

The artists were particularly fortunate in securing the services of William I. Garren, architect, who by the way, is an associate editor of this magazine. In directing this exhibition, Mr. Garren has contributed to the art expression of San Francisco. We suggest that architects encourage this show yearly and send friends and clients to see it and to further add to their stock in professional service by acquaintanceship of the men and women working in the allied arts connected with buildings.

* * *

ALL art that has endured has been a vital record of the time in which it has been created. The Modern Movement, says Mrs. Mildred Rosenthal, secretary of the San Francisco Society of Women Artists, has awakened the world to the necessity of perpetuating our own age in design that is typical of it. Man has always expressed himself through the buildings in which he lived, through the fabrics that clothed his body, through the utensils that served his needs. And it is entirely natural that the artist of today, tired of copying past glories and past decades, should embark independently and utilize facilities to express modern thought. California, with the freedom that is part of youth and health, can well afford to develop her own architecture, her own means of decoration and her own individual beauty. Once again the artist has become an integral part in the daily life of his community.

THE ARCHITECT'S VIEWPOINT

[Concluded from Page 97]

environments, their growth and their unfoldings most convincingly real!

Especially is this true of such a work as his recent "Pheidias" reviewed elsewhere in this issue. Without going into fuller quotation, may not we of "middle age" here echo and see consolation in the word of Pheidias, as he commences work upon his great Zeus of Olympia—realizing that he has:

"Only now attained
The high plateau of life; mountains
beyond —
For how may human being ever reach
An altitude not overlooked by heights
All unattainable?"

* * *

HATS off to the Los Angeles Chamber of Commerce—or should it be to the Palos Verdes "Art Jury?"

In a recent number of *"L'Architecture"* (Paris) extolling the monuments of Washington, D. C., the illustrations comprise—La Maison Blanche, l'Obelisque a Washington, Gare Centrale, le Capitole, **Los Angeles Hotel de Ville,* and Memorial Lincoln.

Isn't it possible to push a good thing—even the Los Angeles City limits, for example—too far?

*Italics are ours.

PHEIDIAS

A Short Commentary of John Galen Howard's Book

THIS is a book that should be read by every architect and draughtsman. Let them not shy away from it when they find that it is a long narrative poem in blank verse. Our distinguished John Galen Howard writes blank verse that runs smoothly and beautifully, and his story of Greece's greatest sculptor is as interesting as a novel. It is the story of a supreme career lived during the highest epoch of Greek art, and in addition to every element essential to a good story, it is packed with thoughts about life and art that are bound to inspire Mr. Howard's architect colleagues.

The greatest works of Pheidias have perished, and only the main facts of his life have been ascertained. His Athene Parthenos, his Athene Promachos, his Delphian Miltiades and his Olympian Zeus we know of only vaguely from coins, medals and doubtful copies. From Plutarch and other sources we know that he was in charge of all the work on the Parthenon, but cannot be sure of the extent to which he worked personally on the sculptures that survive. The meagerness of Pheidian material has served to release Mr. Howard's imagination, and such is his knowledge of Greece in the time of Pericles that after reading this entrancing book we may well say, "If this is not exactly the life that Pheidias lived from birth to death, at least it is the life he should have lived."

Mr. Howard's Pheidias is born on the side of the Acropolis and spends part of his early life on his father's farm amid the marble quarries of Mt. Pentelicus. He is with Aeschylus, his father's friend, on the field of Marathon the night before the battle and, too young to fight, witnesses the victory of Miltiades over the Persians from a nearby hill. His school chums are Pericles and Sophocles. He studies sculpture at Athens under Hegias, and then under Ageladas at Argos where Myron and Polyclitus become his friends. These are all names of renown, and Mr. Howard has historical warranty for associating them closely with Pheidias.

Architects will be interested in the way Mr. Howard makes poetry out of the development of the young artist's faculties. The day before Marathon:

> Over the plain I saw the soldiers running
> And beating round the flank, to Marathon.
> There flashed two thoughts, as one, upon my mind:
> "The Persians must be landing over there—
> Soldiers are just like figures on a jar."—
> For as I said, I never saw a thing
> That touched me deeply but I saw it twice:
> Intensely as it was in outward form
> With inner meaning part of its true form:
> And plastically unified, the whole
> Conventionally rhythmical and flat.

A description of the "chryselephantine" methods of his teacher Ageladas:

> But scarcely less important was the craft
> Of sculpture, as distinguished from the art,
> That Argos taught me—all the processes
> Of technical manipulation that,
> But once acquired, freed fancy's eager wings,
> Which else were earthbound. Attic sculptors worked
> Mostly in marble; but Ageladas
> Delighted in the metals, and his skill
> As founder of fine bronze was unapproached.
> From him I learned the sacred secret ways
> Of pointing up and casting, and the ways
> Of wedding ivory with gold and gems
> To give a structure sound and permanent.
> Even the skeleton of cedar wood
> To which the precious metals were let in,
> I learned to fabricate and brace, myself.

Pheidias goes to Corinth for the Isthmian games and learns from Pericles that the Persians are again coming against Greece under Xerxes. His home is destroyed when the invaders burn Athens, and his family lives under conditions that Mr. Howard may well have borrowed from his memories of San Francisco after the disaster of 1906. At the battle of Salamis Pheidias is seriously wounded. During his recovery a new advance in his art begins when he sees a painting by Polygnotus:

> A sketch
> Penned lightly, swiftly, with the uttermost
> Economy of means, and full of vigor;
> Fancy let loose in method; life itself
> In character. I never yet had seen
> Anything like it. Simple as it was,
> And wholly unpretentious, there was that
> In its whole aspect which proclaimed a soul:
> Instant perfection and the open eye,

The result of his taking up painting:

> There can be no doubt, I think,
> That Polygnotus, with his painter's view,
> Helped on my sculpture in more fertile ways
> Than stricter sculpture-practice could have done.
> As you must surely recognize, I am
> A sculptor with the painter's influence;
> And yet a sculptor straight through to the bone,
> A worker in the idiom of form
> In the full round. Yes, even in relief,
> Which is half painting, always in the round
> I feel my figures—as I feel my life.

Step by step Mr. Howard carries Pheidias forward in the mastery of life and art. His Delphian, Athenian and Olympian masterpieces grow before us as we read this strong, nervous poetry. The high point, of course, is the building of the Parthenon. Then follows a typical instance of the notorious fickleness of Athens. Pheidias is denounced for impiety and Pericles cannot save him. He dies in prison, poisoned by his envious friend Menon—a dramatic conclusion justified by a paragraph in Plutarch. Running through the poem there is a "love-interest" delicately adjusted to the rest of the story.

Some years ago John Galen Howard brought out his poem *Brunelleschi,* and then, if I am not mistaken, many who admired Mr. Howard the architect learned for the first time that he was also a poet. That poem was a fine achievement, but in the opinion of the present writer who has always had a special admiration for John Galen Howard as man and artist, *Pheidias* represents a very distinct advance beyond the art of his *Brunelleschi. Pheidias* is Greece of the best period—it makes the best art of Greece live so vividly that even the ultra-modernist must surely pause and ponder this old-world beauty.

—EDWARD F. O'DAY.

THE ARCHITECT; HIS MISSION

Bernard R. Maybeck, of San Francisco, who achieved fame as the architect of the Fine Arts Building, Panama Pacific Exposition, addressed the Section on Architecture of the Commonwealth Club at its first meeting, March 27th.

Mr. Maybeck sketched a general image of the subject of architecture and mentioned a few of its vital influences. He traced the effects of spiritual, philosophical and material forces on the art of various periods of the world's history and upon the work of the present day. He stressed the necessity of an architect's approaching his subject without prejudices and with the realization that his faculties should be employed in an interpretative sense—that, for example, a house should be the reflection of the owner's habits of life and not the architect's.

The meaning and value of architecture in the community was brought out and a pleasant forecast made regarding the modern trend in the use of materials.

He said in part:

"The Greek architecture always come back.

"We have been working in paint and putty ever since the French revolution. Everybody who knew anything then had his head cut off; we have been slowly learning ever since.

"If you want to realize what power Saint Peter's dome has, wait until you are leaving Rome, then turn and look back at it.

"In designing a building one must first consider how to 'move' the public.

"A good piece of architecture would 'lift' you; a cathedral speaks to you.

"It is said that when you pass the Kremlin you feel afraid.

"Perhaps these great structures are the handwriting of the men or the nations that built them!

"You architects cannot make a medieval building today; in the first place you haven't the soul—in the second place you are thinking too much of your bread and butter to be sincere.

"One cannot duplicate anything from the past except by imagining how one of the men of the past would have done it.

"An architect must be a historian.

"The Palace of Fine Arts was inspired by a fragment supposed to have been a part of the Temple of the Sun.

"We are today in a happy country because some of the men of the past had the courage to do some of the terrible things which they did do.

"The man we put in prison today was the man who used to make the world turn round.

"When you have a man who likes lots of flattery you have a man who will be at home in a Louis XIV interior—never was there a man who could gobble more flattery than Louis XIV.

"If you want to see bad taste, go into a musician's house; musicians think of nothing but music. Yet in few lines of effort is appearance more important—put the musician on the street in ordinary clothes and he would not earn a copper.

"An architect can be the man who expresses his nation by getting rid of himself and watching to see what the main influence of the times are."

AN UNUSUAL BROCHURE

Michel and Pfeffer have just published one of the most elaborate brochures ever offered to the architectural profession by the building trade. Twenty-five or more full-page plates in dark green duotone of the Four Fifty Sutter Building are shown, together with a portfolio of splendid details of the new San Francisco Stock Exchange. William I. Garren, architect, writes the commentary and Herbert Ridelstein has drawn an unique and striking modernistic cover which is printed in gay colors. Silver fly-sheets add to the richness of the brochure, more than 3,000 copies of which have been printed and distributed throughout the country.

ARCHITECT AN EXPERT WITNESS

A licensed architect having had a number of years experience, is qualified as a competent expert witness, according to a recent court ruling in the case of Mahan vs. Springer (Wash.) 283 Pac. 667, when it was sought to disqualify M. C. Pherson, licensed architect, as expert witness.

LATE INVENTIONS IN THE CONSTRUCTION FIELD

EDITOR'S NOTE—This Department by Ray Belmont Whitman, Patent Attorney of New York City, is intended to keep the reader advised upon the latest patented inventions in the fields of the architect and the engineer. Mr. Whitman offers to the readers of THE ARCHITECT AND ENGINEER *personal advice without obligation on any subject connected with patents, trade marks, designs or copyrights. All inquiries should be addressed to "Patent Editor," care of this magazine.*

WHO MAY OBTAIN A PATENT

OUR laws say that "any person" may obtain a patent in the United States. The person may be a foreigner or an American citizen, adult or minor, male or female, black or white, Jew or Gentile, a college graduate or educated in "the school of hard knocks." There are no exceptions. "Any person" means anybody and everybody who complies with the legal requirements.

The true inventor, if alive, must always sign the application for a patent. If anyone else signs, the patent is invalid, and so of no value. There may be more than one inventor, in which case they are called "joint inventors," and each must sign the application papers as such. They then obtain a "joint patent." No one of them can obtain a patent, for an invention jointly invented by all. Also, independent inventors of distinct and independent improvements in the same machine can not obtain a joint patent for their separate inventions.

How to Obtain a Patent

Read the following paragraph carefully. It will answer many questions which are usually not understood.

"A patent may be obtained by any person who has invented any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvement thereof. But it must not have been known or used by others in this country before his invention and not patented or described in any printed publication in this or any foreign country before his invention, or more than two years prior to his applicaton. And it must not have been patented in a country foreign to the United States on an application filed by him or his legal representative or assign more than twelve months before his application, and not in public use or on sale in the United States for more than two years prior to his application, unless the same is proved to have been abandoned."

To be patentable, then, the idea must be "new." Of that, more later. Also, it must have been "invented"—that is, conceived by the inventor through the exercise of the creative faculty, and not merely by imitation. Again, the idea must be "useful"—that is, applied to the production of a practical result. There is an exception to this last statement in "design" patents, which cover merely the aesthetic appearance or ornamentation of the article, and are not directed to a practical or "useful" function.

Now having found out just what a patent is, let us next consider, generally, the kind that fail and those that succeed.

Patent Failures

In the beginning, it must be admitted that the majority of patents issued to inventors, week in and week out, do not return to them even

SOME RECENT INVENTIONS

Blast Furnace, Number 17,551, Re-issued January 7th, 1930, inventor, Wallace Stuart, Clevelaod, Ohio, Inventor, assigned to Inlaod-Stuart Lisings, Inc., Delaware.

Window and Door Frame, Number 17,552, Reissued January 7, 1930 to the inventor Fred C. Anderson, Bayport, Minn.

Weather Stripping, No. 1,742,195, Issued January 7, 1930 to the inventor Maurice E. Bosley, Chicago, Ill., assigned to The D. W. Bosley Company, Chicago, Ill.

Fire-Escape Railway Structure, No. 1,742,202, Issued January 7, 1930 to the inventor, Edward Ehlers, Montclair, N. J.

Building Structure, No. 1,742,209, Issued January 7, 1930 to the inventor, Charles F. Kuhnla, Jamaica, N. Y., assigned to August Kuhnla, Inc., New York.

Beam Hanger, No. 1,742,210, Issued January 7, 1930 to the inventor, John Lally, Great Neck, N. Y.

Column, No. 1,742,223, Issued January 7, 1930 to the inventor, Horace H. Sears, New York, N. Y.

Storm Window, No. 1,742,405, Issued January 7, 1930 to the inventor, Ovide L. Martin, Bradley, Ill.

Sliding Door, No. 1,742,408, Issued January 7, 1930 to the inventor, John P. McWilliams, Cleveland, Ohio.

Window Frame, No. 1,742,435, Issued January 7, 1930 to the ioventor, William H. Cox, Ness City, Kansas.

Excavator and Method of Operating Same, No. 1,743,123, Issued January 7, 1930 to the inventor, Frank Elwood, Weiner, Ark.

Fire Box for Cast-Iron Boilers, Issued January 7, 1930 to the inventor, Harry E. Gilbert, Bridgeport, Conn.

Apparatus for Making Sand Cores, No. 1,743,473, Issued January 7, 1930, to French H. Moorehead, Boston, Mass.

Device for Filling and Sealing Cracks, No. 1,-743,474, Issued January 7, 1930, to the inventor, William H. Norfolk, Brentwood Heights, Cal.

Building Wall, Material and Methods of Making Same, No. 1,743,527, Issued January 14, 1930 to the inventor, Dominick J. Calderazzo, Brooklyn, N. Y.

Window-Glass Fastener, No. 1,743,077, Issued January 14, 1930 to the inventor, Jacob Mauthe, Waterbury, Conn.

Shutter, No. 1,743,696, Issued January 14, 1930 to Henry M. Vetterlein, Philadelphia, Pa.; one-half interest assigned to Henry Penn Burke, Philadelphia, Pa.

Sheet Metal Window, No. 1,743,783, Issued January 14, 1930 to the inventor, George W. Lancaster, Richmond, Va.

Expanded Metal Lath, No. 1,743,800, Issued January 14, 1930 to the inventor, James W. Pearce, Philadelphia; assigned to North Western Expanded Metal Co., Chicago, Ill.

Nosing for Stair Treads, No. 1,743,982, Issued January 14, 1930 to the inventor, John W. Scott, New York.

Escalator, No. 1,743,995, Issued January 14, 1930 to the inventor, Gad R. Bartlett, Boston, Mass.

Steel Bleacher, No. 1,744,127, Issued January 21, 1930 to the inventors, Henry D. Oberdorfer, Champaign and Ralph R. Bramhall, Decatur, Ill.

Building Block and Method of Laying Same, No. 1,744,171, Issued January 21, 1930 to the inventor, Edward M. Lane, Charleston, S. C.

Air-Cooled Furnace Block, No. 1,744,185, Issued January 21, 1930 to the inventors, Frank H. Waite and George W. Davey, Long Island City, N. Y.

Tile and Fixture Mounting, No. 1,744,187, Issued January 21, 1930 to the inventor, William G. Webster, Chicago, Ill., assigned to Porcelain Tile Co., Chicago, Ill.

Window Construction, No. 1,744,394, Issued January 21, 1930 to the nventor, Claude A. Lewis, Houston, Texas.

Shingle and Method of Cutting the Same, No. 1,744,490, Issued January 21, 1930 to the inventor, Charles W. Mortimer, Upper Montclair, N. J.

Interior Building Construction, No. 1,744,582, Issued January 21, 1930 to the inventor, Clarence H. Collings, Cleveland Heights, Ohio.

Reenforcement for Monolithic Elemeats, No. 1,-745,880, Issued February 4, 1930, to the inventor, Joseph Winston, New York, N. Y.

the cost of taking out these patents, not to mention the time and expense of developing the ideas to the point of filing the applications in Washington. There are many reasons for this unfortunate condition, some of which it is the purpose of these articles to explain, and to suggest means of correcting or largely eliminating. Other reasons exist which cannot be removed, and so they will be clearly pointed out, in the hope that many of these useless patents may in the future be eliminated.

Patent Successes

In spite of the many patent failures, it is nevertheless true that for every ten of them that result in a loss to the inventor, there is one, or possibly two, that returns a profit so great as to many times wipe out the combined loss from the failures, and leave a handsome surplus besides.

Newspaper accounts frequently attest to the more sensational of these successes. Only recently there was the report of a check for a million dollars having been drawn in favor of a Russian immigrant boy for his patent rights on an automatic photograph apparatus. A few years ago Major Armstrong, who invented the regenerative circuit for radio receivers, is said to have received for his patent right a half million dollars from several large electrical companies. In this author's more recent personal experience, one inventor of a non-set automatic stop for phonographs was paid $125,000 in royalties by one large phonograph company, in less than three years and for rights secondary to their own. During a recent investigation of the alien-owned patents taken over by the government in the name of the Chemical Foundation, it was revealed that a large camera company had long been paying one hundred thousand dollars a month in royalties for the use of a small group of German-owned patents.

These only typify a few of many instances; for there are thousands of cases where the cash rewards from patented inventions have meant financial independence for their inventors and promoters.

But the inventor who seeks to profit under the patent laws must know what to invent, and also what NOT to invent. This is a very large question, but a little general advice will prove of value.

What To and Not To Invent

The inventor has the best chance of success who confines his inventive efforts to a field, or industry, about which he knows something; such, for instance, as the one in which he earns his livelihood. Many of the patent failures are due to the fact, as someone has facetiously remarked, that the "Iowa farmer attempts to invent a new form of submarine or the Cape Cod fisherman, a new threshing machine!"

Again, invent something in line with your mental capabilities and your financial station in life. For instance, if you are an average citizen without too much money or technical knowledge, don't try to invent anything too complicated, such as a new form of gas-turbine to drive an automobile; for the experimental work and the cost of the first model necessary to determine the practicability of such highly technical machines, runs into tens of thousands of dollars, and this burden must often first be shouldered by the inventor before he can hope to get anyone to finance him further. A well-to-do technician, such as John Hays Hammond, Jr., might well attack such a problem, but not an inventor.

Building Construction, No. 1,746,443, Issued February 11, 1930, to the inventor George F. Pawling, Philadelphia, Pa., assigned to Pawling System, Inc., Philadelphia, Pa.

Supporting Concrete Beam, No. 1,746,559, Issued February 11, 1930, to the inventor Rolf Sahlberg, New York, N. Y., assigned to The Aerocrete Corporation, New York, N. Y.

Method of Making Compound Wall Structures, No. 1,746,595, Issued February 11, 1930, to the inventor Luther Loucine Knox, Bellevue, Pa., assigned to Knox Products Company, Pittsburgh, Pa.

Reenforcing Fabric, No. 1,746,625, Issued February 11, 1930, to the inventor Arthur J. White, Pittsburgh, Pa.

Building Construction, No. 1,746,816, Issued February 11, 1930, to the inventor George F. Boes, Indianapolis, Ind.

Foundation, No. 1,746,918, Issued February 11, 1930, to the inventor Fred Elburn Webster, San Antonio, Texas.

*Copies of any of the above patents may be obtained by sending fifteen (15c) cents for each copy desired to the "Patent Editor" in care of this magazine.

QUESTIONS AND ANSWERS

Readers are urged to avail themselves of this free service for advice on the subjects of Patents, Trade Marks, Designs and Copyrights. If a personal answer is desired a stamp should be enclosed with the inquiry, otherwise the question and its answer will appear in this section in the first available issue. Address all questions to the Patent Editor, care THE ARCHITECT AND ENGINEER. Write on one side of the paper only, giving full name and address and business connection (only initials will be published if requested).

Q. (1) *I have obtained a patent on my invention but am now told that I may not have the right to manufacture and sell it without infringing some patent belonging to another. I thought the Government would not grant a patent unless it was free of such infringement. Please advise what is the fact.—Gordon Brown, Los Angeles.*

A. (1) The Government grants patents irrespective of possible infringement. The search made by the Patent Office before the granting of a patent is only directed to determine whether the invention is new and patentable. It may be only an improvement of some other person's patent, in which case that earlier patent might be infringed. Thus you would have the right to prevent others from infringing the claims of your patent without having the right yourself to use your own invention without infringing the rights of others. This point will be explained fully in a later article of the series being run here.

Q. (2) *Is it possible to sell or license a patent right on an invention before the patent is issued and while it is still in the application stage?—A. R. C., San Diego.*

A. (2) It most certainly is. In fact, many valuable license royalty contracts as well as outright sales of patents are effected before the patent is issued. After you have filed your application you can proceed to try and market your invention and patent-right-to-be.

Q. (3) *What is the total cost for filing a patent application on a simple invention and how much more will it cost before the patent has been obtained?—Ralph Barrett, Hartford.*

A. (3) About one hundred and thirty-five dollars ($135.00) to one hundred and fifty dollars ($150.00) should cover the cost of preparing and filing the papers, including the drawing, the attorney's fees and the government filing fee of twenty dollars ($20.00), thereafter two or three amendments at perhaps twenty-five dollars ($25.00) each and a final fee of twenty dollars ($20.00) to the Government will secure the patent. These latter expenses, however, are spread over several years, usually.

Q. (4) *Does it pay to take out many foreign patents?—C. M. H., Washington, D. C.*

A. (4) It usually does not pay to take out many of them but it is advantageous to protect the invention in the several most important foreign countries such as Great Britain, Germany, France, Canada, Japan and possibly one or two of the South American countries. This advice, however, is general and much depends upon the specific circumstances.

THE DECORATIVE ARTS MOVEMENT IN SAN FRANCISCO

By Mildred Rosenthal

THREE years ago, at a meeting of the Board of Directors of the San Francisco Society of Women Artists, the idea of presenting a Decorative Arts Exhibition was conceived. It was during the presidency of Miss Helene Forbes, and the movement in the last few years owes much to her ability in carrying on that first year.

A few guilding principles were laid down in that initial meeting that have been maintained and enlarged upon subsequently. First, in sponsoring an exhibition of this kind, the San Francisco Society of Women Artists must insist upon a broad, catholic and versatile display. Second, the undertaking must be above politics of any kind, so that artists throughout California could feel free to contribute work for exhibition. Third, it must be representative of the best contemporary work designed and executed in California, thereby presenting an exhibition typical of the Western Artists' contribution to contemporary American Decorative Art.

Recognizing the opportunity that the modern movement affords for the artist and architect to work together, it was also immediately suggested that the San Francisco Chapter, American Institute of Architects, be invited to cooperate in guiding the undertaking.

Previous to the first Decorative Arts Exhibition sponsored by the San Francisco Society of Women Artists and the Women's City Club, in 1928, there had been no place in which California Art in Industry had been displayed. The fine arts exhibitions, valuable in their own field, had left untouched the problem of presenting the artists' contribution in the fields of furniture designing, textiles, metal work, glassware, etc. And yet, the artist has been steadily exercising a vital part in industrial designing and has proved his place in the planning and ornamenting of domestic and commercial structures.

Outside of New York, the American public has had little opportunity to appreciate the great strides that their artists have made in the fields of decoration. Although European art centers have sponsored decorative arts exhibitions for years, the American public has been forced to resort to reproductions in magazines for their inspiration along these lines. In presenting a display of this kind to the lay public of California, the San Francisco Society of Women Artists and the Women's City Club are truly pioneering.

To consummate a project of such vital educational importance to the community requires vision, courage and immense physical energy.

It has meant to the executives who have directed the exhibition the personal sacrifice of many months of professional duties.

This year's executive chairman, Mrs. Arthur Lee Bailhache, has made an outstanding contribution to the decorative arts movement in San Francisco. An artist of unusual resourcefulness, she has brought to her organization an enthusiasm that has been a vital factor in the realization of this year's display.

Miss Rose Pauson, art chairman of this year's exhibition, served in similar capacity last year. The success of the past two years owes much to her fine judgment and ability.

William I. Garren, who represents the San Francsico Chapter, American Institute of Architects on the executive staff, has been responsible this year for the general decorative plan of the auditorium. His tireless efforts and sympathetic cooperation are reflected in the architectural achievements of the exhibition.

The executive committee for the exhibition follows: Mrs. Emilie Siebert Weinberg, president San Francisco Society of Women Artists; Miss Marion Teale, president, Women's City Club; Mrs. Arthur L. Bailhache, executive chairman; Miss Rose Pauson, art chairman; Wm. I. Garren, director, general plan; Mrs. Charles Felton, Mrs. Joseph Sloss, ways and means; Mrs. Hyman Rosenthal, publicity; Mrs. Robt. Cross, representing Women's City Club; Miss Jean Boyd, Garden Club; Mrs. Ernst Baerwald, secretary.

Among those who have served on the general committee are: Messrs: Wm. Gerstle, president, S. F. Art Association; Lee Randolph, director, California School Fine Arts; John Bakewell, Ernest Weihe, Walter Steilberg, Irving Morrow, Warren Perry, Albert Evers and Albert Bender.

The exhibition, as presented this year, shows again that the sponsors have kept faith with their public. It reflects the spirit of earnest experimenting that has been responsible for many new and interesting features. If, being critical, we realize that we have not attained perfection, unreservedly we acknowledge that we have striven for it!

WITH *the* ARCHITECTS

NOTHING ABROAD LIKE IT

The Architect and Engineer,
San Francisco.

We were delighted to receive a copy of the March number of THE ARCHITECT AND ENGINEER and would like to congratulate you upon it. It certainly is one of the most interesting architectural papers that we have yet seen, and we regret that we have nothing in Europe quite like it.

Our Doctor Ettinghausen has just perused it with special pleasure because he is very fond of the new architecture of San Francisco.

Again thanking you, we remain,

Yours sincerely,
MAGGS BROS.

SAN JOSE ARCHITECTS SUE

Wolfe & Higgins, architects of San Jose, have filed suit in the superior court in that city against Victor M. Smith, of the U. S. Shipping Board and a stock holder in the Dollar Steamship Company.

The suit is brought for a bill of $1001 for professional services and interest for eight years, making a total of $1608.

Mr. Smith, according to the complaint, commissioned the architects to prepare plans for a Japanese tea garden project at San Antonio Road and the highway east of Los Gatos. When the project "fell through," he failed to compensate the architects for their services.

ARCHITECT IN NEW OFFICES

Joseph L. Stewart, architect, has moved his offices from the Holbrook Building to the Federal Reserve Bank Building, San Francisco. Mr. Stewart is preparing sketches for a number of recreational buildings to be erected in various cities and towns in the northern part of the state. The buildings will cost from $60,000 to $75,000 each.

SAN RAFAEL HOTEL

Plans have been completed by Frederick H. Slocombe, 85 Cambridge Way, Piedmont, for a hotel at San Rafael, for C. R. Danzinger of San Francisco. There will be approximatley sixty-five rooms. The hotel will occupy a portion of a two and a half acre site which is to be graded for golf. The improvements will cost $150,000.

CHRISTIAN SCIENCE CHURCH

Plans are being prepared in the office of Henry H. Gutterson, 526 Powell Street, San Francisco, for a $50,000 concrete and rustic Christian Science Church at Magnolia and Bonita Streets, Piedmont. It will seat five hundred persons. Mr. Gutterson is also working on plans for a new club house at Belvedere, Marin County, for the San Francisco Yacht Club.

LONG BEACH LODGE BUILDING

Plans have been completed in the office of W. Horace Austin and Schilling and Schilling, associated, Long Beach, for a four story reinforced concrete lodge building to be erected on Cedar Avenue, Long Beach, for the Long Beach Lodge of Elks. The same architects are also preparing plans for a four story Class A Masonic Temple at Santa Ana.

FIVE STORY APARTMENTS

Plans have been completed in the office of Bliss and Fairweather, Balboa Building, San Francisco, for a five story steel frame and concrete apartment building to be erected at Haight and Steiner Streets, San Francisco, for Mrs. Louisa Hagmaier, 222 Fillmore Street, San Francisco. The building will have twenty-two two-room apartments.

CONCRETE SWIMMING TANK

California Plunges, Ltd., with offices in the Howden Building, Oakland, have announced their intention of spending $100,000 in the construction of a reinforced concrete and tile plunge on Whitmore Street, near the Technical High School, Oakland. The pool will be 60x160 feet.

ADDITION TO Y. M. C. A., BERKELEY

Plans are being prepared by W. H. Ratcliff, Jr., for a $150,000 addition to the Berkeley Y. M. C. A. building. It will be a four story Class C. structure arranged to accommodate the junior members of the Association.

LOS ANGELES APARTMENTS

Plans have been completed for an eight-story apartment building at 436 North Rossmore Avenue, Los Angeles, for H. Feigenbaum & Sons. The architect is Max Maltzman, Union Bank Building, Los Angeles.

MONTEREY BUILDING

Guy L. Brown, American Bank Building, Oakland, has completed plans for a one story brick dental office building, Monterey, for W. T. Lee. Mr. Brown has also completed drawings for a factory in Oakland for the Standard Acetyline Gas Company. The Herrick Iron Works will furnish the structural steel.

RICHARD WRIGHT

Richard Wright, manager of the Los Angeles office of Carleton M. Winslow, architect, died April 8 of heart disease. He was 45 years of age, had been in Mr. Winslow's employ for the last five years and was a member of the State Bar Association. His father, editor of the Boston *Globe,* and a daughter living in Los Angeles, survive.

SAN MATEO RESIDENCE

Plans have been completed by Harold G. Stoner, 220 Third Avenue, San Mateo, for a $20,000 Spanish type residence for E. S. Shaver. Mr. Stoner has also made plans for a Spanish house on Mira Loma Drive, San Francisco, for E. B. Ward, also to cost $20,000.

OAKLAND MERCANTILE BUILDING

Plans have been revised by Weeks and Day, architects, 405 Montgomery Street, San Francisco, for the I. Magnin Building in Oakland. The new design is to be modernistic and will probably be five stories in height.

ALAMEDA APARTMENT BUILDING

Chester H. Treichel, American Bank Building, Oakland, has completed plans for a $60,000 three-story frame and stucco apartment building to be erected on Santa Clara Avenue, Alameda, for A. C. Cook.

LOS BANOS HOTEL

A hotel to cost $150,000 is being planned by C. W. McCall of Oakland for the Los Banos Hotel Corporation. Plans provide for six stores, coffee shop, large lobby and fifty or more rooms.

MANTECA LODGE BUILDING

The Portuguese Society of Manteca will have a brick veneer lodge building, to cost $15,000, from plans by Joseph Losekann, 1218 West Harding Street, Stockton.

PAROCHIAL RESIDENCE

H. A. Minton, 525 Market Street, San Francisco, has completed drawings for a frame and stucco parochial residence at 18th Avenue, near Vincentes Street, San Francisco, for St. Cecelia's Parish. Vincent Buckley, in Mr. Minton's office, has completed drawings for a two story Class C store and loft building on Market Street near Pearl, San Francisco, for Mrs. Van Damme.

NEWSOM BROTHERS BUSY

The Oakland office of Sidney B., Noble and Archie Newsom is busy on considerable new residence work, including a house for A. C. Webb in Pebble Beach and houses in Berkeley for Harry Muldaney and E. H. Horton. The same architects are preparing preliminary sketches for a medico-dental office building.

W. H. WEEKS BUSY

New work in the office of William H. Weeks, architect of San Francisco, Oakland and San Jose, includes a city hall and legion building at Auburn; school house at Grimes; store and hotel in San Jose for Paul Masson, and a grammar school building at Ceres, Stanislaus County.

CLAREMONT PINES RESIDENCE

Plans are being prepared in the office of Masten & Hurd, 210 Post Street, San Francisco, for an English brick and stucco residence in Claremont Pines, Berkeley, for Dr. W. E. Mitchell. Construction is to be handled by J. P. Brennan, 2820 Regent Street, Berkeley.

BURLINGAME APARTMENTS

Russell B. Coleman has completed plans for a $50,000 apartment building in Burlingame, for Ray J. Mullin; also, a $30,000 Spanish residence in Hillsborough, and two $10,000 homes in Baywood, San Mateo County.

PAROCHIAL SCHOOL

Plans have been completed by George E. McCrea, Hearst Building, San Francisco, for a three story brick parochial school and convent for St. Jarlath Parish. The improvements will cost $100,000.

ADDITION TO HOSPITAL

The Dameron Hosptal, Stockton, is to have a $70,000 addition from plans by H. G. Bissell, 421 E. Miner Street, Stockton.

SURVEY OF SKYSCRAPERS

Skyscrapers have become economic necessities in the cities of North America. Their growth and development constitutes an important part of the "Fact Book" recently issued by the American Institute of Steel Construction. In this volume, which represents an enlargement and modification of the report issued last year for the first time, will be found an authentic list of tall buildings, including all the important structures in all of the larger cities of the continent. Area, volume, and other important dimensions as well as height, are included in this survey of skyscrapers.

The "Fact Book" also includes a directory of the steel constructors of North America, statistical record of the industry, bibliography, motion pictures, stereoptican slides and innumerable other handy facts of interest.

ARCHITECTS DISSOLVE PARTNERSHIP

Felchin, Shaw & Franklin, architects, with offices in the T. W. Patterson Building, Fresno, announce the dissolution of partnership. Raymond R. Shaw becomes associated with George Hales in Los Angeles. Mr. Felchin retires from active practice leaving Charles H. Franklin to go on with the Fresno office.

Mr. Franklin became associated with Mr. Felchin in 1912 and Mr. Shaw joined the firm in 1919. The firm handled some of the largest building construction jobs in Fresno, including the Pacific-Southwest Bank, Radin & Kamp and the San Joaquin Light & Power Corporation buildings.

DONALD M. SUTHERLAND

Donald McLean Sutherland, 51, noted marine architect, died suddenly at his home in Alameda, April 15. He had just returned from Los Angeles, where he was awarded a medal at a boat show for his designs of pleasure yachts. An official of the United Shipbuilding Corporation of Alameda, Sutherland designed the interiors of all the President steamships of the Dollar line.

CHAS. A. WAGNER

The body of Charles A. Wagner, 39, San Francisco civil engineer, was found in a canyon in San Mateo county April 15, with a bullet through his temple and revolver clutched in one hand. It is said he worried over financial difficulties. Mr. Wagner was well known to San Francisco architects, several of whom employed him for engineering services from time to time.

PERSONAL

H. Roy Kelley, architect of Los Angeles, is enjoying himself in travel and study abroad.

James Dean, architect, recently appointed city manager of Sacramento, addressed the members of the Sacramento Builders' Exchange at the regular luncheon meeting, April 22.

Lutah Maria Riggs, architect and William Allen Horning, associate, for many years in the office of George Washington Smith, announce the formation of a partnership for the completion of Mr. Smith's work and the general practice of architecture. For the present the office will be at Seventeen Mesa Road, Montecito.

Dr. Ernest L. Tross, noted architectural critic and author, was the principal speaker at the luncheon meeting of the Architects' League of Hollywood recently. His subject was, "The Philosophy of Modern Architecture."

Emil F. Cycler, consulting engineer, announces the opening of an office in Suite 1127, Bank of Italy Building, Seventh and Olive Streets, Los Angeles.

Milton J. Black has moved from 6644 Santa Monica Boulevard to 624 S. La Brea Avenue, Los Angeles.

Horatio W. Bishop has moved from 6328 San Vicente Boulevard to 6432 Moore Drive, Los Angeles.

C. Roderick Spencer and John J. Langdon and Harrison Clarke, associates, have moved from 4350 Beverly Boulevard to 1924 Hillhurst Avenue, Los Angeles.

Harry J. Devine, formerly associated with Dean & Dean, architects of Sacramento, has taken new offices in the California State Life Building, Sacramento. Mr. Devine has a number of important commissions, including a convent and church.

WIN PRIZES FOR BRIDGE DESIGN

Three students at the University of Illinois won the three cash prizes of 1930 offered by the American Institute of Steel Construction for the most beautiful design of a steel bridge submitted by architectural students. These prizes, amounting to $500, $250, and $100 respectively, were made through the Beaux-Arts Institute of Design. A total of 160 students enrolled in the competition and submitted sketches in the preliminary judgment. The problem called for a design of a steel bridge of 650 feet total length and with a main arch span of 325 feet. The prizes were awarded at the final judgment to George D. Recher, first; Russel O. Deeter, second, and Don P. Ayres, third, all of the University of Illinois.

SOCIETY and CLUB MEETINGS

A. I. A. CONVENTION

The Sixty-third Convention of the A. I. A. will be held May 21, 22, and 23, at Washington, D. C.

This year the convention comes approximately a month later than last year. In the spring Washington is so congested with visitors, conventions, conferences, and like forms of Americana, that it is difficult to hold a satisfactory meeting in late April or early May The program:

Wednesday, May 21

The President's Address; Report of the Board of Directors; Symposium on "Contemporary Architecture" (Modernism).

The evening session of this day has been allocated to "Public Information," which includes "Advertising Architecture and Architectural Services"; "Personal Advertising by the Architect"; and other moot questions about which there is much difference of opinion. William Harmon Beers, Chairman of the Committee on Public Information, will preside. The Publicist of the Institute, James T. Grady, whose work is conducted under the supervision of the Committee on Public Information, will be present and, with Mr. Beers, will endeavor to answer questions.

Thursday, May 22

Amendments to the By-Laws, in the morning. If time permits there will be a free afternoon on Thursday, on which all attending the convention may have opportunity to visit the new public buildings now under construction in Washington, and to otherwise entertain themselves without reference to convention business.

In the evening the Committee on Education will have a special session, at which the speaker will be Leicester B. Holland, Chairman, Department of Fine Arts, University of Pennsylvania. The Fine Arts, and Craftsmanship Medals will be awarded at the conclusion of this session.

Friday, May 23

This day is left open for the completion of Institute business, and will really constitute a full business day. This year, the reports of the standing and special committees are addressed to the Board of Directors and not to the convention. The Board's report will submit to the convention the recommendations and resolutions offered by the committees. Therefore, action on the many matters coming under the jurisdiction of Institute committees will be reached in the seriatim consideration of the Board's report.

As at all Institute conventions there will be ample opportunity for discussion from the floor. The Chapters are asked to bear in mind that in their respective territories they constitute the American Institute of Architects. Delegates should come to the convention prepared to represent the views of their Chapters in acting on matters which come before the convention, bearing in mind that the common good of the Institute, and the architectural profession as a whole, is the goal sought.

The last session of the convention will be a dinner at the Mayflower Hotel. There will be one or more prominent speakers. The dinner will conclude with the induction of the new President into office, and his assumption of the gavel from the retiring President, C. Herrick Hammond. Every delegate and member should plan to attend the dinner.

The Visit to Fredericksburg, Saturday, May 24

This will mark an innovation in Convention procedure. The Board of Directors will postpone its post-convention meeting until Sunday, so that all of Saturday may be free for a motor trip to Fredericksburg, Virginia. Arrangements will be made to take all those attending the convention on a tour of inspection and recreation to historic Fredericksburg. Such a program can be carried out comfortably in one day, permitting a return to Washington in time for early evening trains. It is hoped to have open for inspection not only historic Kenmore, the home built by Col. Fielding Lewis for his bride, the sister of George Washington, but Chatham, and other buildings of historic interest, including the home of Mary, mother of Washington, the Rising Sun Tavern where Lafayette was entertained, the law offices of President James Monroe, and the Hugh Mercer apothecary shop where Washington maintained a business office. An outdoor luncheon will be served at Kenmore in the middle of the day. All of those attending the convention are urged to make their plans include this visit to Tidewater, Virginia.

STATE BOARD MEETING

The semi-annual joint meeting of the Northern and Southern Sections, California State Board of Architecture, was held in Los Angeles, April 7th.

The special committee composed of Lester W. Hurd, Edwin Bergstrom and Myron Hunt reported that an agreement had been made between the State Association of California Architects and the American Institute of Architects, whereby the latter would undertake to publish a set of contract documents applicable to the state of California. The agreement between the State Association and the Institute was approved by the board. An attorney will be employed and arrangements will be made at once to commence the preparation of these documents which, it is felt, will be of valuable assistance to the architects and building contractors' of California.

Richard C. Farrell and W. I. Garren presented the financial statements of their respective sections of the Association.

The chairmen of the various standing committees reported that the activities assigned to their respective committees were being carried out and they all hoped to have a very complete report ready for the convention to be held in Del Monte, October 10 and 11, 1930.

Those in attendance at the meeting were:

Chairman J. J. Donovan, Oakland; vice-chairman, A. M. Edelman, Los Angeles; directors, Mark T. Jorgenson, San Francisco; Charles F. B. Roeth, Oakland; Myron Hunt, Los Angeles; Natt Piper, Long Beach; secretary-treasurer, R. C. Farrell, Alhambra; assistant secretary-treasurer, W. I. Garren, San Francisco.

Chairman, Professional Betterment Committee, Northern Section, Lester W. Hurd, San Francisco.

Chairman, Professional Betterment Committee, Southern Section, Robert H. Orr, Los Angeles.

Chairman, Public Information Committee, Northern Section, H. C. Collins, Palo Alto.

Chairman, Public Information Committee, Southern Section, Vincent Palmer, Los Angeles.

Chairman, Educational Committee, Southern Section, Sumner M. Spauling, Los Angeles.

Chairman, 1930 Convention Committee, Harris C. Allen, Oakland.

Guests were:

Edwin Bergstrom of Los Angeles, national treasurer of the American Institute of Architects.

Fred H. Meyer of San Francisco, president State Board of Architectural Examiners.

Albert J. Evers of San Francisco, secretary-treasurer State Board of Architectural Examiners.

Louis J. Gill of San Diego, member of the State Board of Architectural Examiners.

SANTA BARBARA CHAPTER

The present officers of the Santa Barbara Chapter, A. I. A., are: President, Russell Ray; Vice-president, Harold Burket; Secretary, E. Keith Lockard; Treasurer, John Frederic Murphy.

This Chapter feels very much the loss of its member and friend, George W. Smith, who died March 16th. Mr. Smith's work in the architectural profession is well known to all its members.

At the meeting of the Chapter on March 24th an exhibition committee was appointed to arrange for an exhibit of the work of the Santa Barbara architects to be displayed in Santa Barbara and elsewhere if desired.

At the Chapter meeting on April 3rd Floyd E. Brewster was unanimously elected an associate member.

In addition to the regular business of the monthly meetings, the Chapter has been active in securing speakers for the discussional meetings of the University Club.—E. K. L.

PASADENA ARCHITECTURAL CLUB

As we grow older, says a versatile member of the Pasadena Architectural Club in *The Lintel* for April, and the Wine of Life oozes out drop by drop and the Leaves of Life fall one by one and we get gray around the ears like an Airedale dog—well, we're getting old, what I mean, and we begin to wonder why the Sam Hill we still hang on to our jobs in Architecture, instead of becoming a journeyman bootlegger or joining some other trade or profession requiring a smaller expenditure of energy and, pardoning our conceit, brains. It's a question which has bothered us for years and will probably go on bothering us until our feeble legs can no longer bear us to our daily drafting board and our aged eyes can no longer distinguish half inches at one-eighth inch scale. Thousands have asked this question before us, and judging from the way our schools are turning out new victims, we don't seem to want to have it answered. Architecture, in our opinion, is an incurable disease. Once thoroughly infected, one never recovers, and the curious part of the whole business is that most of us don't want to be cured. After all, why should we? If things keep on at their present pace, with

new problems, new materials and new methods of construction cropping up every minute, architecture is going to be lots of fun for the next few years, and we want to be in it.

* * *

The Pasadena Club has gone in for Art with a big A. Over one hundred members took in the Huntington Gallery on Saturday afternoon, April 5th. The pictures are wonderful; we merely quote those who have been fortunate enough to have seen the great galleries of the world, in saying that there exists no finer collection of 18th century English portraiture. The Library, while perhaps less interesting to the average person, is full of unique printings and writings, to be seen nowhere else, and the grounds are dotted with antique marbles, fountains, statuary and what-not. The Mausoleum, by John Russel Pope, is, in itself, worth the trip.

* * *

The Pasadena Club, after witnessing the Dishonor Awards of the Los Angeles Group, has decided to write a play and put it on themselves. Our motto is, "If los Angeles can do it, Pasadena can do it, better." The play is being written by one of our most brilliant members. To appreciate the originality and beauty of this offering you must see it for yourself.

The characters have been carefully selected and are true to type; the hero, handsome and industrious, is from Bennett & Haskell's office; the villian is from Wallace Neff's force.

The club's annual dinner took place May 1 and was a huge success.

LOS ANGELES CHAPTER

At the April 15 meeting of Southern California Chapter, A. I. A., recommendation that the name be changed to Los Angeles Chapter was presented by the committee on Institute and Chapter affairs.

Reports of committees and Chapter business occupied most of the evening. President H. C. Chambers presided.

The committee on public information recommended the endorsement of a "Consult Your Architect" slogan to be used by building material manufacturers in connection with their advertising and this was adopted with certain reservations.

Resolutions expressing the Chapter's appreciation and extending its thanks to the honor awards committee were adopted.

John C. Austin informed the meeting that no more oral examinations will be given by the State Board of Architectural Examiners to applicants for certificates.

Paul J. Duncan and Richard J. Neutra were elected members of the Institute and the transfer of William H. Schuchardt from the Northern New York Chapter was accepted.

Charles Stowe, editor of *Antiquarian,* and an associate editor of the New York *Sun,* spoke for a few minutes on antiques and architecture. He remarked that more progress had been made in architecture in this country than any of the arts. He also remarked that more progress had been made in residence design in Southern California than any other section of the country.

The meeting closed with an interesting talk by William Templeton Johnson and an exhibit of motion pictures recently taken by him in Spain, showing views of the Seville and Barcelona Expositions. Mr. Johnson designed the buildings erected by the United States government at these expositions.

WRITTEN "EXAMS" FOR CANDIDATES

The State Board of Architectural Examiners has issued State Certificates to the following list of Provisional Certificate holders.

The Board takes this opportunity to announce that there will be no more Oral Examinations from this time on, and anyone wishing to procure a certificate to practice architecture in the State of California will be required to take a written examination.

Northern District

Walter C. Clifford, 1253 Clay Street, San Francisco; J. Lloyd Conrich, 630 Lake Street, San Francisco; John Ekin Dinwiddie, 2815 Oak Knoll, Berkeley; Harold F. Genss, 2249 Ward Street, San Francisco; Guy O. Koepp, P. O. Box 644, Carmel; Earl R. MacDonald, 194 John Street, Oakland; Edmund J. Resing, 425 Kearny Street, San Francisco; William L. Schmolle, 519 California Street, San Francisco.

Southern District

Welton David Becket, 318 West 9th Street, Los Angeles; Milton J. Black, 529 West Knoll Drive, Hollywood; Donald Francis Brode, 941 West 34th Street, Los Angeles; Gerard R. Colcord, 1538 Brighton Way, Beverly Hills; Nathan Lindell Coleman, 1558 Vine Street, Los Angeles; Rowland Ashby Curry, Architects Bldg., Los Angeles; Mark Daniels, Administration Bldg., Bel Air; Walter F. Fuesler, 539 N. Mansfield Ave., Los Angeles; John Robert Harris, 6715 Hollywood Blvd., Los Angeles; Douglas Honnold, 1747 Cahuenga Ave., Los Angeles; Richard F. King, 1430 Sherbourne Ave., Los Angeles; Paul W. Krempel, Bank of Italy Bldg., Los Angeles; Frederick C. Marsh, 1864 Glenview Terrace, Altadena; Max Waltzman, 420 Union Bank Bldg., Los Angeles; William Sutherland McCay, 35 South Raymond Ave., Pasadena; Everett Ely Parks, 423 N. Claudina Ave., Anaheim; Hayward Peirce, 3634 Jackdaw Street, San Diego; Theodore L. Pletsch, 146 So. Berkeley Ave., Pasadena; C. Waldo Powers, 318 West 9th Street, Los Angeles; Lester C. Scherer, 1510½ N. Vermont Ave., Los Angeles; Rudolph Michael Schindler, 835 Kings Road, Los Angeles; Lloyd A. Steffgen, 51 So. Euclid Ave., Pasadena; Raymond A. Sites, 427 Cedar Ave., Long Beach; Allen George Siple, 972 Arapahoe Street, Los Angeles; Charles A. Stone, 2218 Juliet St., Los Angeles; Don Uhl, 7024 Melrose Ave., Los Angeles; Wm. Kenneth Webb, 1239 East 10th Street, Long Beach; Walter F. Zick, 135 No. Curtis Ave., Alhambra.

SAN FRANCISCO ARCHITECTURAL CLUB

The April meeting was held in the S. F. A. C. Club rooms at 523 Pine Street and was very well attended. The walls of the meeting room were covered with water color and pencil sketches done by Harold Weeks, and the walls of the billiard room were covered with the traveling exhibition of the Beaux Arts Institute of Design.

A letter was received from the California State Association of Architects requesting two members to meet with their Public Relations Committee to formulate plans to improve working conditions. Ira Springer and Howard Chapman were chosen.

After the business meeting twenty candidates were initiated into the mysteries of Architecture and it is believed that it left a lasting impression.

* * *

W. B. Rue, chairman of the Entertainment Committee, announces the fourth annual picnic to be held Sunday, May 11th at Mitchell's Canyon at the base of Mount Diablo in Contra Costa County. All members of the architectural profession and the allied arts are invited. It is reported those who attended the previous picnics will not miss this one.

We have been very fortunate in securing this park through the courtesy of the Henry Cowell Lime and Cement Company, which is making every effort to put the park in the best shape possible. All the picnic tables and benches, as well as the dance platform, are practically new. There is a fine baseball ground and a large swimming tank that will be full of clear mountain water for the occasion.

One of the features of the day will be the baseball game between the Architects and Engineers for the cup, a perpetual trophy donated by the W. S. Dickey Clay Mfg. Co. Some of the other events will be a horseshoe pitching contest, swimming and diving exhibitions, golf and other games with suitable prizes for the winners. Dancing will continue all afternoon to some real music.

Bring your basket lunch. The club will furnish plenty of hot coffee with fresh milk and cream direct from contented cows. There are some fine barbecue pits and a good fire will be going for those who would like to barbecue their steaks.

* * *

There has been a good deal of pep shown in the Atelier lately, with numerous awards. Sous-Massier Jim Gillem succedeed in capturing a first mention on the last problem. All the members are at work designing their buildings according to Rome Blas's article on "Architecture Moderne," published in the last issue of the "Esquisse."

* * *

The club is trying a new method in regard to employment, and anyone wishing a job, or having one to be filled, should call the club rooms week days between 12:15 and 1:00 p. m. It is hoped that the architects will co-operate in this respect.

Last, but not least, our club luncheons. If you haven't anywhere in particular to go on Thursday noons, drop in at the Wall Street Coffee Shop, Pine Street, near Montgomery.—R. N.

ENGINEERS INSTALL OFFICERS

The following officers were installed at the meeting of the Los Angeles Chapter, American Association of Engineers, at the Engineers' Club, Los Angeles, April 16:

F. E. Trask, president, consulting engineer and president of the Randall Control and Hydrometric Corp., graduate of the University of Maine.

W. C. Hogoboom, vice-president, Bridge Division Bureau of Engineering, City of Los Angeles, graduate of Missouri School of Mines.

J. A. H. Baird, director, plant engineer, Filtrol Clay Products, Los Angeles, graduate of Cornell University.

P. H. Calahan, director, engineer, Associated General Contractors; secretary, the California Engineers' Registration Association and assistant secretary of the State Board of Registration for Civil Engineers.

THE ILLITERATE RICH

Charles A. Johnson, of Cass Gilbert's office in New York, writers:

"I designed a house recently for a woman who was 'nouvelle riche,' as her husband acquired his riches during the war. When I was showing the sketches of the house to my client, she inquired whether or not I had provided a medicine cabinet in the bathroom.

"I told her that I had and showed it to her on the plan, explaining that it was right over the lavatory. She looked at me and said, 'Wouldn't it be rather awkward to get at if it is over the lavatory?'

"I said that the medicine cabinet is always placed over the lavatory as that is the most convenient place for it.

"She replied with a haughty air, 'Well, in my apartment on Riverside Drive the medicine cabinet is over the wash basin.' "—*Pencil Points.*

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The United Materials Company, 625 Market St., San Francisco.

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W. H. Picard, 5656 College Ave., Oakland.
Luppen & Hawley, 3126-J St., Sacramento.
William F. Wilson Co., 240 Fourth St., San Francisco.
James A. Nelson, Inc., Howard and Tenth Sts., San Francisco.
Scott Company, 243 Minna St., San Francisco.
Geo. A. Schuster, 4712 Grove St., Oakland.
Mangrum Holbrook Co., 1235 Mission St., San Francisco.

HEATING EQUIPMENT
E. A. Cornely, Inc., 1452 Bush St., San Francisco.
Illinois Engineering Co., 417 Market St., San Francisco.
Warren Webster & Company, Sharon Bldg., San Francisco, and 306 Crocker St., Los Angeles.
James A. Nelson, Inc., Howard and Tenth Sts., San Francisco.
B. F. Sturtevant Co., Monadnock Bldg., San Francisco; Los Angeles, Portland, Seattle.
C. A. Dunham Company, Dunham Bldg., 450 Ohio St., Chicago, and principal Coast cities.

HOLLOW BUILDING TILE (Burned Clay)
Cannon & Co., plant at Sacramento; Call Bldg., San Francisco.
N. Clark & Sons, 112-116 Natoma St., San Francisco; works, West Alameda, Calif.
Gladding, McBean & Co., 660 Market St., San Francisco; 621 S. Hope St., Los Angeles; 1500 First Ave. South, Seattle; 454 Everett St., Portland; 15th and Dock Sts., Tacoma, and 22nd and Market Sts., Oakland.
W. S. Dickey Clay Mfg. Co., San Francisco and Oakland.

HOME BUILDERS
G. W. Williams Co., 1404 Broadway, Burlingame, Calif.

HOSE
The American Rubber Mfg. Co., Park Ave. and Watts St., Oakland, Calif.

HOSE RACKS AND REELS
American Rubber Mfg. Co., San Francisco, Oakland, Los Angeles and Portland, Ore.

HOSPITAL SIGNAL SYSTEMS
Chicago Signal Co. represented by Garnett Young & Co., 390 Fourth St., San Francisco.

ICE RINK CONSTRUCTION
The Dyer Construction Company, 1924 Broadway, Oakland.

INCINERATORS
The Goder, sold by M. E. Hammond, 557 Market St., San Francisco.
Kewanee Boiler Co., 637 Minna St., San Francisco.

INDUSTRIAL LIGHTING EQUIPMENT
Westinghouse Electric and Mfg. Co., East Pittsburgh, Pa., and Crocker First National Bank Bldg., San Francisco.

INSPECTIONS AND TESTS
Robert W. Hunt Co., 251 Kearny St., San Francisco.

INSULATION
"Insulex" manufactured by Pacific Portland Cement Co., Hunter-Dulin Bldg., San Francisco, and 1200 Chapman Bldg., Los Angeles.
Western Asbestos Magnesia Co., 25 South Park, San Francisco.
Gunn, Carle & Co., 444 Market St., San Francisco.
Ric-wil distributed by H. G. Sperry Co., 74 New Montgomery St., San Francisco.

INSULATED WIRE
Hazard Insulated Wire Works, Wilkes-Barre, Pa., Russ Building, San Francisco, Seattle and Los Angeles.

INTERIOR DECORATORS
S. & G. Gump Company, 246 Post St., San Francisco, and Honolulu, T. H.

KITCHEN EQUIPMENT
General Electric Refrigerator, L. H. Bennett, Rialto Building, San Francisco, and the

KAWNEER STORE FRONTS ARE DURABLE AND PRACTICAL

« CLASSIFIED LIST of ADVERTISERS for ARCHITECT'S REFERENCE »

ALPHABETICAL LIST OF ADVERTISERS ON PAGE 162

George Belsey Company, Architects Building, Los Angeles.
James A. Nelson, Inc., Howard and Tenth Sts., San Francisco.
Mangrum Holbrook Company, 1235 Mission St., San Francisco.
McCray Refrigerator Sales Corp., Kendallville, Indiana; San Francisco office, 765 Mission Street.

LACQUERS
The Paraffine Companies, Inc., San Francisco, Los Angeles, Oakland, Portland and Seattle.
Bass-Hueter Paint Company, San Francisco, and all principal Coast cities.
"Nitrolac" manufactured by R. N. Nason & Co., 151 Potrero Ave., San Francisco.
Mangrum Holbrook Co., 1235 Mission St., San Francisco.

LANDSCAPE ARCHITECTS
Neal T. Childs, Menlo Park, California.

LATHING MATERIAL—WIRE, METAL, ETC.
Genfire Steel Co., Sheldon Bldg., San Francisco; Builders' Exchange, Oakland.
Truscon Steel Co., Sharon Building, San Francisco.
Soule Steel Company, Rialto Building, San Francisco, and Los Angeles.
"Steeltex" manufactured by National Steel Fabric Co., Pittsburgh, Pa.; 351 Bryant Street, San Francisco. 1358 Wholesale Street, Los Angeles; Seattle and Portland.

LAUNDRY MACHINERY AND EQUIPMENT
Troy Laundry Mach'y Co., Ltd., East Moline, Ill., and 951 Mission St., San Francisco.
Gunn, Carle & Co., 444 Market St., S. F.

LIGHTING FIXTURES, OUTLETS, ETC.
Westinghouse Electric and Mfg. Co., Crocker First National Bank Bldg., San Francisco; general offices and works, East Pittsburgh, Pa.
The Frink Company, 369 Lexington Avenue, New York, and principal Coast cities.
Sterling Bronze Co., Inc., 18 East 40th St., New York.

LINOLEUM
William Volker & Co., 631 Howard St., San Francisco, and 2301 E. 7th St., Los Angeles.
The Paraffine Companies, factory in Oakland; office, 475 Brannan Street, San Francisco.
W. & J. Sloane, 216 Sutter Street, San Francisco.
Van Fleet-Freear Company, 557 Howard St., San Francisco, and 3307 Wilshire Boulevard, Los Angeles.
Bonded Floors—Sealex Linoleum and Tile manufactured by Congoleum-Nairn, Inc., D. N. & E. Walter & Co., San Francisco; Broadway Department Store, Los Angeles.

LUMBER
G. H. Brown Hardwood Company, 1044 47th Ave., Oakland.
Pacific Mfg. Co., San Francisco, Oakland, Los Angeles and Santa Clara.
Santa Fe Lumber Co., 16 California St., San Francisco.
Sunset Lumber Company, First and Oak Sts., Oakland.
E. K. Wood Lumber Co., Frederick and King Streets, Oakland.
Port Orford Cedar Products Co., Marshfield, Oregon, represented by Dant & Russell, Inc., Porter Bldg., Portland, Oregon.

MAIL CHUTES
Cutler Mail Chute Co., represented by Price Building Specialties Co., 683 Howard St., San Francisco and Continental Building Specialties Co., 1216 Hibernian Bldg., Los Angeles.

MARBLE
American Marble Company, 25 Columbus Square, San Francisco.
Clervi Marble Company and Mosaic Co., 1721 San Bruno Avenue, San Francisco.
Ray Cook Marble Company, foot of Powell St., Oakland.
Joseph Musto Sons-Keenan Co., 536 N. Point St., San Francisco.
Vermont Marble Co., Coast branches, San Francisco, Los Angeles and Tacoma.
Tompkins-Kiel Marble Company, 506 Fifth Ave., New York. also Chicago, Philadelphia and San Francisco.

MARBLE HARDWARE
M. Greenberg's Sons, 765 Folsom St., San Francisco; 122 E. Seventh St., Los Angeles; 101 N. 5th St., Portland; 1103 Post St., Seattle.

MASONRY ANCHORS
Steelform Contracting Company, Monadnock Bldg., San Francisco; Edwards & Wildey Bldg., Los Angeles.

METAL COVERED DOORS
Fire Protection Products Co., 1101 Sixteenth St., San Francisco.
Forderer Cornice Works, Potrero Ave., San Francisco.

METAL LATH (Stay-Rib)
Milwaukee Corrugating Co., Milwaukee, Wis., Soule Steel Co., Rialto Bldg., San Francisco, distributors.

MILLWORK
The Fink & Schindler Co., Inc., 218-68 13th St., San Francisco.
Pacific Mfg. Co., San Francisco, Los Angeles, Oakland and Santa Clara.
Sunset Lumber Company, First and Oak Streets, Oakland.
Lannom Bros. Mfg. Co., Fifth and Magnolia Sts., Oakland.
Chicago Lumber Company of Washington. 66th and 69th Aves. and Spencer Street, Oakland.
E. K. Wood Lumber Co., Frederick and King Streets, Oakland.

MONEL METAL
"Inco" brand, distributed on the Pacific Coast by the Pacific Foundry Company, Harrison and 18th Streets, San Francisco, and Eagle Brass Foundry, Seattle, Wash.

OBJECTS OF ART
S. & G. Gump Company, 246 Post St., San Francisco, and Honolulu, T. H.

OIL BURNERS
Rayfield Oil Burner, Coast Distributors, E. A. Cornely, Inc., 1452 Bush Street, San Francisco.
S. T. Johnson Company, 1337 Mission St., San Francisco; 940 Arlington St., Oakland; 1729 Front St., Sacramento, and 230 N. Sutter St., Stockton.
Vaughn-G. E. Witt Co., 4224-28 Hollis Street, Emeryville, Oakland.
Coen Company, 112 Market St., S. F.
California Hydro-Oil Burner, Inc., 1714 Sixteenth Street, Oakland.

ORNAMENTAL IRON AND BRONZE
Federal Ornamental Iron and Bronze Co., 16th St. and San Bruno Ave., San Francisco.
Michel & Pfeffer Iron Works, 1415 Harrison St., San Francisco.
Palm Iron and Bridge Works, Sacramento.

PAINTING, DECORATING, ETC.
The Tormey Co., 681 Geary St., San Francisco.
A. Quandt & Sons, 374 Guerrero Street, San Francisco.
D. Zelinsky & Sons, Inc., 165 Grove St., San Francisco.

PAINTS, OILS, ETC.
The Paraffine Companies, Inc., San Francisco, Los Angeles, Oakland, Portland and Seattle.
Bass-Hueter Paint Company, San Francisco, Los Angeles, Portland, Seattle.
R. N. Nason & Co., 151 Potrero Ave., San Francisco.

PANEL BOARDS
Drendell Electric & Mfg. Co., 1760 Howard St., San Francisco.
Frank Adam Electric Company, 340 Fremont St., San Francisco, and 1127 Wall Street, Los Angeles; general offices, St. Louis, Mo.
Westinghouse Elec. and Mfg. Co., Crocker First National Bank Bldg., San Francisco; general offices and works, East Pittsburgh, Pa.

PANIC EXIT DEVICES
Von Duprin, manufactured by Vonnegut Hardware Company, Indianapolis; sold by D. A. Pancoast Co., 605 Market Street, San Francisco.

PARTITIONS—MOVABLE OFFICE
Dahlstrom Metallic Door Company, Jamestown, N. Y., Coast plant, 3350 E. Slauson Ave., Los Angeles.
Pacific Mfg. Co., Monadnock Building, San Francisco; factory at Santa Clara.

PENCILS AND ERASERS
A. W. Faber Company, Newark, N. J., represented by Cahen, Davis & Company, 313 Severance Bldg., Los Angeles, Calif.

PIPE—WROUGHT IRON
Reading Iron Co., Reading, Pa., and Balbos Bldg., San Francisco.

PLASTER
"Empire," manufactured by Pacific Portland Cement Co., Hunter-Dulin Building, San Francisco, Portland, San Jose and Los Angeles.

PLASTER BASE
"Celotex," Western Asbestos Magnesia Co., 25 South Park, San Francisco.

PLASTERING CONTRACTORS
A. Knowles, Call Bldg., San Francisco.
MacGruer & Company, 266 Tehama Street, San Francisco, and Pacific Mutual Bldg., Los Angeles.

PLUMBING CONTRACTORS
Gilley-Schmid Company, 198 Otis St., San Francisco.
Hateley & Hateley, 1710 Tenth St., Sacramento.
Luppen & Hawley, 906 7th St., Sacramento.
Scott Co., Inc., 243 Minna St., S. F.
Wm. F. Wilson Co., 248 Fourth Street, San Francisco.
Geo. A. Schuster, 4712 Grove St., Oakland.
W. H. Picard, 5656 College Ave., Oakland.

PLUMBING SUPPLY HOUSES
Standard Pacific Fixtures, 349 Sutter St., San Francisco.
Tay-Holbrook, Inc., 165 8th Street, San Francisco.
Clarence Drucker, manufacturers' representative, 307 Minna St., San Francisco.
Walworth Company, Boston, Mass., San Francisco office, 235 Second Street.

PLYWOOD
Port Orford Cedar Products Co., Marshfield, Oregon, represented by Dant & Russell, Inc., Porter Bldg., Portland, Oregon.

PRESSED STEEL
Berger Manufacturing Co., 1120 Mission St., San Francisco.

PRESSURE REGULATORS
Vaughn-G. E. Witt Co., 4224-28 Hollis Street, Emeryville, Oakland.

PUMPING MACHINERY
Simonds Machinery Co., 816 Folsom Street, San Francisco; 5220 East 4th Street, Los Angeles.

PUMPS—HAND OR POWER
Ocean Shore Iron Works, 558 Eighth St., San Francisco.
S. F. Bowser & Co., Inc., 425 Brannan St., San Francisco.

REFRIGERATORS
"General Electric," sold by the George Belsey Company, Architects Building, Los Angeles; L. H. Bennett, Rialto Bldg., San Francisco.
McCray Refrigerator Sales Corp., Kendallville, Indiana; San Francisco office, 765 Mission Street.
Dependable Mfg. Co., 62 Oak Grove Avenue, San Francisco.

REINFORCING STEEL
Soule Steel Company, Inc., Rialto Bldg., San Francisco, and Los Angeles.
Gunn, Carle & Co., Inc., 444 Market St., San Francisco.
United Alloy Steel Corporation, Canton, Ohio; Western Sales Office, Santa Fe Bldg., San Francisco.
Truscon Steel Company, Sharon Bldg., San Francisco.

ROOF CONTRACTORS
General Roofing Company, Beach and Halleck Streets, Oakland.

ROOF MATERIALS
El Rey Products Co., 1633 San Pablo St., Los Angeles; 960 7th St., San Francisco; 65 Columbia St., Seattle; 850 E. Taylor St., Portland.
Krafile Company, office and factory at Niles; show room, 765 New Montgomery Street, San Francisco.
"Malthoid" and "Ruberoid," also "Pabco" 10 and 20 year roofs, manufactured by the Paraffine Companies, Inc., San Francisco, Los Angeles, Oakland, Portland and Seattle.
Gladding, McBean & Co., 660 Market St., San Francisco; 621 S. Hope St., Los Angeles; 1500 First Ave. South, Seattle; 454 Everett St., Portland; 15th and Dock Sts., Tacoma, and 22nd and Market Sts., Oakland.
N. Clark & Sons, 112-116 Natoma Street, San Francisco; works, West Alameda, California.
W. S. Dickey Clay Mfg. Co., Rialto Bldg., San Francisco.
Johns-Manville Corporation of California, 159 New Montgomery St., San Francisco.
The United Materials Company, 625 Market St., San Francisco.
Western Asbestos Magnesia Company, 25 South Park, San Francisco.
Pioneer Paper Co., 5500 South Alameda, Los Angeles; Hearst Bldg., San Francisco; offices in Portland, Seattle, Salt Lake City, Spokane and Denver.
General Roofing Company, Beach and Halleck Streets, Oakland.

ROOF MATERIALS (Two-Drain Metal Roofing & Copper Tile)
Milwaukee Corrugating Co., Milwaukee, Wis.,

« CLASSIFIED LIST of ADVERTISERS for ARCHITECT'S REFERENCE »

ALPHABETICAL LIST OF ADVERTISERS ON PAGE 162

Soule Steel Co., Rialto Bldg., San Francisco, distributors.

RUGS AND CARPETS—IMPORTED
Kent-Costikyan, Inc., 485 Fifth Ave., New York City, with offices at 442 Post St., San Francisco and 816 South Figueroa St., Los Angeles.
W. & J. Sloane, 216 Sutter St., San Francisco.

SAFETY TREADS
Price-Teltz Company, 683 Howard St., S. F.
Gunn, Carle & Co., 444 Market St., S. F.

SASH CHAINS
American Chain Company, Inc., Bridgeport, Conn., and 425 Second St., San Francisco.
The Smith & Egge Mfg. Co., P. O. Box 1040, Bridgeport, Conn.; 506 American Bank Bldg., Los Angeles.

SCAFFOLDING FOR CONTRACTORS
Steelform Contracting Company, Monadnock Bldg., San Francisco; Edwards & Wildey Bldg., Los Angeles.

SEATING—SCHOOL, THEATER, CHURCH
Home Manufacturing Company, Inc., 552 Brannan St., San Francisco.
C. F. Weber & Co., San Francisco, Los Angeles, Phoenix, Ariz.; Reno, Nevada.

SELF-RELEASING FIRE EXIT DEVICES
Von Duprin, manufactured by Vonnegut Hardware Company, Indianapolis; sold by D. A. Pancoast Co., 605 Market St., S. F.

SHADES
William Volker & Co., 631 Howard Street, S. F.; 2301 East 7th St., Los Angeles.

SHEATHING
The Sisalkraft Company, 205 W. Wacker Drive, Chicago, Ill.; 55 New Montgomery St., San Francisco and Hammond Lumber Co., Los Angeles.

SHEATHING AND SOUND DEADENING
Western Asbestos Magnesia Co., 25 South Park, San Francisco.

SHEET METAL WORKS
Forderer Cornice Works, Potrero Ave., San Francisco.

SHOW CASES
Home Manufacturing Company, Inc., 552 Brannan St., San Francisco.
Mullen Manufacturing Company, 64 Rausch St., San Francisco.

SHOWER DOORS—GLASS SHIELDS
M. Greenberg's Sons, 765 Folsom St., San Francisco; 122 E. Seventh St., Los Angeles; 101 N. 5th St., Portland; 1103 Post St., Seattle.

SOUND ABSORBING TREATMENT
Johns-Manville Corporation, 159 New Montgomery St., San Francisco.

SIGNALING & PROTECTIVE SYSTEMS
Garnett, Young & Co., 390 Fourth St., San Francisco.

SLUDGE BED GLASS-OVERS
Lord & Burnham Co., Irvington, N. Y., and 208 So. La Salle St., Chicago, Ill.

STANDPIPE SIAMESE AND VALVES
M. Greenberg's Sons, 765 Folsom St., San Francisco; 122 E. Seventh St., Los Angeles; 101 N. 5th St., Portland; 1103 Post St., Seattle.

STEEL FABRIC
Soule Steel Company, Rialto Bldg., San Francisco, and Los Angeles.
National Steel Fabric Co., Pittsburgh, Pa.; 351 Bryant Street, San Francisco; 1358 Wholesale Street, Los Angeles; Seattle and Portland.

STEEL FORMS
Steelform Contracting Company, Monadnock Bldg., San Francisco; Edwards & Wildey Bldg., Los Angeles.

STEEL TANKS
Ocean Shore Iron Works, 55 Eighth St., San Francisco.

STEEL LUMBER
Genfire Steel Co., Sheldon Bldg., San Francisco; Builders' Exchange, Oakland.

STEEL SASH
Bayley-Springfield solid steel sash, sold by Gunn, Carle & Co., 444 Market St., San Francisco.
"Fenestra" Solid Steel Sash, manufactured by Detroit Steel Products Co., factory sales office, 526 Hunter-Dulin Bldg., San Francisco.
Michel & Pfeffer Iron Works, 1416 Harrison St., San Francisco.
Truscon Steel Company, 74 New Montgomery St., San Francisco.
W. S. Lea, 653 South Clarence St., Los Angeles.

STEEL—STRUCTURAL
Bethlehem Steel Company, Pittsburg, Pa., Matson Building, San Francisco; Pacific Building, Los Angeles; L. C. Smith Building, Seattle; American Bank Building, Portland, Oregon.
Golden Gate Iron Works, 1541 Howard St., San Francisco.
Judson Pacific Company, C. F. Weber Bldg., Mission and Second Sts., San Francisco shops, San Francisco and Oakland.
McClintic-Marshall Company, 2050 Bryant Street, San Francisco.
Herrick Iron Works, 18th and Campbell Sts., Oakland.
Pacific Coast Eng. Co., foot 14th St., Oakland.
Palm Iron & Bridge Works, Sacramento.
Schrader Iron Works, Inc., 1247 Harrison St., San Francisco.
Western Iron Works, 141 Beale St., S. F.
Consolidated Steel Corporation, 1200 N. Main St., Los Angeles.

STORE FRONTS
Kawneer Mfg. Co., 8th and Dwight Streets, Berkeley.

STORE FURNITURE
Berger Manufacturing So., 1120 Mission St., San Francisco.

STREET LIGHTING EQUIPMENT
Westinghouse Electric and Mfg. Co., East Pittsburgh, Pa., and Crocker First National Bank Bldg., San Francisco.

STRUCTURAL STEEL SHAPES
Bethlehem Steel Company, Matson Building, San Francisco; Pacific Finance Building, Los Angeles; L. C. Smith Building, Seattle; American Bank Building, Portland, Oregon.

SUN BAN ROOMS
Lord & Burnham Co., Irvington, N. Y., and 208 So. La Salle St., Chicago, Ill.

SWIMMING POOL GLASS ENCLOSURES
Lord & Burnham Co., Irvington, N. Y., and 208 So. La Salle St., Chicago, Ill.

SWITCHES AND SWITCHBOARDS
Drendell Electrical & Mfg. Co., 1345 Howard St., San Francisco.
Westinghouse Elec. & Mfg. Co., Crocker First Nat. Bank Bldg., San Francisco; general offices and works East Pittsburgh, Pa.

TELEPHONE SERVICE ARRANGEMENTS
All Bell Telephone Companies. Apply nearest Business Office, or American Telephone and Telegraph Company, 195 Broadway, New York.

THERMOSTATS FOR HEAT REGULATION
Johnson Service Company, Milwaukee, Wis.; Rialto Building, San Francisco.

TERRA COTTA
N. Clark & Sons, 116 Natoma St., S. F.
National Terra Cotta Society, 230 Park Avenue, New York, N. Y.
Gladding-McBean & Co., San Francisco, Los Angeles, Portland and Seattle.

TILE—RUBBER, CLAY, CORK, ETC.
Rossman Corporation of California, 49 Geary Street, San Francisco and Architects' Bldg., Los Angeles.
N. Clark & Sons, 112-116 Natoma Street, San Francisco; works, West Alameda, Cal.
Congoleum-Nairn, Inc., D. N. & E. Walter & Co., San Francisco, and Broadway Department Store, Los Angeles.
Gladding, McBean & Co., 660 Market St., San Francisco; 621 S. Hope St., Los Angeles; 1500 First Ave. South, Seattle; 454 Everett St., Portland; 15th and Dock Sts., Tacoma, and 22nd and Market Sts., Oakland.
Kraftile Company, factory at Nilec; 55 New Montgomery Street, San Francisco.
Mangrum-Holbrook, Inc., 1235 Mission St., San Francisco.
United States Rubber Co., 300 Second St., San Francisco, and 923 Los Angeles St., Los Angeles, Calif.
Armstrong Cork Tile, sold by Van Fleet-Freear Co., 557 Howard Street, San Francisco; 3307 Wilshire Boulevard, Los Angeles.
The Mosaic Tile Co., Zanesville, Ohio; West Coast offices: E. K. Porter, 568 - 7th St., San Francisco; O. M. Bendure, 2470 Enterprise St., Los Angeles.
Mangrum-Holbrook Co., 1235 Mission St., San Francisco.

UNDERGROUND CONDUIT
Ric-wil distributed by H. G. Sperry Co., 74 New Montgomery St., San Francisco.

UNDERFLOOR DUCT SYSTEM
Johns-Manville Corporation, 159 New Montgomery St., San Francisco.

VACUUM HEATING SYSTEM
C. A. Dunham Company, Dunham Bldg., 450 Ohio St., Chicago, and principal Coast cities.

VALVES—PIPES AND FITTINGS
Clarence Drucker, Manufacturers' Agent, 307 Minna Street, San Francisco.
Grinnell Co., Fifth and Brannan Sts., S. F.
Sloan Valve Company, Chicago; E. C. Whalen, 954 Western Pacific Bldg., Los Angeles; W. J. Driscoll, 482 Monadnock Bldg., San Francisco; E. C. Fallein, U. S. National Bank Bldg., Denver; S. D. Cochran, L. C. Smith Bldg., Seattle, Wash.

VARNISHES
Bass-Hueter Paint Company, San Francisco, Los Angeles, Portland, Seattle.
The Paraffine Companies, Inc., San Francisco, Los Angeles, Portland and Seattle.
R. N. Nason & Co., 151 Potrero Ave., S. F.

VENETIAN BLINDS
C. F. Weber & Company, 601 Mission St., San Francisco.

VENTILATING EQUIPMENT
B. F. Sturtevant Co., Monadnock Bldg., San Francisco; Los Angeles, Portland and Seattle.

VENTILATORS
"The Panelouvre," sold by M. E. Hammond, Pacific Bldg., San Francisco.

VITREOUS CHINAWARE
Standard-Pacific Plumbing Fixtures, 349 Sutter St., San Francisco; 919 W. Seventh St., Los Angeles; 1301 Fifth Ave., Seattle Wash.; 48 Fifth St., Portland, Ore.

WATER HEATERS—GAS
Pittsburg Water Heater Company, (gas), 478 Sutter Street, San Francisco.

WALL BEDS, SEATS, ETC. (See Beds).

WATER COOLERS
General Electric Refrigerator, L. H. Bennett, Rialto Building, San Francisco, and the George Belsey Company, Architects Building, Los Angeles.

WALL BEDS
Marshall & Stearns, Phelan Building, S. F.
Rip Van Winkle Wall Bed Co., 51 Second St., San Francisco, and 792 22nd St., Oakland.

WALL TILE
The Mosaic Tile Co., Zanesville, Ohio; West Coast Offices: E. K. Porter, 568-7th St., San Francisco; O. M. Bendure, 2470 Enterprise St., Los Angeles.

WATERPROOFING
Johns-Manville Corporation, 159 New Montgomery St., San Francisco.
The Paraffine Companies, Inc., San Francisco, Los Angeles, Oakland, Portland, Seattle.
Gunn, Carle & Co., 444 Market St., San Francisco.
The Sisalkraft Company, 205 W. Wacker Drive, Chicago, Ill.; 55 New Montgomery St., San Francisco and Hammond Lumber Co., Los Angeles.

WATER SUPPLY SYSTEMS
Kewanee Water Supply System — Simonds Machinery Co., agents, 816 Folsom St., San Francisco; 520 East Fourth Street, Los Angeles.

WINDOW SHADES
William Volker & Co., 631 Howard Street, San Francisco; 2301 East 7th Street, Los Angeles.
W. & J. Sloane, 216 Sutter St., S. F.
D. N. & E. Walter & Co., 562 Mission St., San Francisco.

WINDOWS—STEEL, REVERSIBLE, ETC.
Campbell and Wolfmann Metal Windows, distributed by Fire Protection Products Company, 1101 Sixteenth St., S. F.
Crittall Casement Window Company, Detroit, Mich. Badt-Falk & Co., 74 Montgomery Street, San Francisco. F. T. Crowe & Co., 216 Walker Bldg., Seattle. R. H. Hoskins, 510 Hyde Bldg., Spokane. McCracken-Ripley Co., 61 Albina Avenue, Portland, F. T. Crowe & Co., 1177 Dock Street, Tacoma, Wash. Crittall Casement Window Co., 504 Union Insurance Bldg., Los Angeles.
Hauser Window Co., 1362 Harrison St., S. F.
Detroit Steel Products Co., Detroit, Mich.; Hunter-Dulin Building, San Francisco and Pershing Square Building, Los Angeles.
W. C. Lea, 653 South Clarence St., L. A.

WINDOWS, BASEMENT
Milwaukee Corrugating Co., Milwaukee, Wis., Soule Steel Co., Rialto Bldg., San Francisco, distributors.

WIRING SYSTEM
Westinghouse Electric and Manufacturing Company, Crocker First National Bank Bldg., San Francisco; general offices and works, East Pittsburgh, Pa.

SEE THE NEW MODERNISTIC KAWNEER STORE FRONT

BOOK REVIEWS

By Edgar N Kierulff

THE SKYSCRAPER (A Study on the Economic Height of Modern Office Buildings)—By W. C. Clark, V. P. of S. W. Straus & Company, and J. L. Kingston of Sloan & Robertson, Architects. Published by the American Institute of Steel Construction, Inc., New York and Cleveland.

The title of this book is significant. Today is the day of the tall office building and this contribution to our modern skyscraper, which makes a thorough study of all the conditions surrounding the erection and maintenance of such a building, should be most welcome to potential builders and owners. The book takes up in chronological sequence: the economic argument, from the private owner's viewpoint; the economic argument, from the public viewpoint; the public health argument, the public safety argument and a most important chapter on the traffic congestion argument.

LOS ANGELES ANNUAL BUILDERS GUIDE, Vol. VII, 1930. Published by The Interstate Educational Association, A. C. Hoff, General Manager, 726 Story Bldg., Los Angeles. Price, Regular Edition $7.00, de Luxe Edition $12.00.

Another of these very excellent handbooks embracing one of the most complete and authentic builders guides obtainable in California. The 1930 edition has been brought up to date in every respect and offers the contractor, builder, specification writer and architect a valuable and ready reference guide.

ACOUSTICS OF BUILDINGS (Including Acoustics of Auditoriums and Sound Proofing of Rooms)—By F. R. Watson, Professor of Experimental Physics, University of Illinois. Second Edition (revised). Price $3.00. Published by John Wiley & Sons, Inc., New York.

This book of slender dimensions and pocket size, contains a wealth of usable material on its topics, i. e. acoustics and sound proofing. It is divided into three parts, under each of which is a group of chapters. The three parts mentioned are: Part I, Introduction; Part II, Acoustics of Auditorium (five chapters embracing every detail of the science of acoustics.) Part III, Sound proofing in buildings (six chapters) taking into consideration every detail of this important factor in present day construction. The book should prove of value to all architects interested in the erection of theaters, schools, churches and auditoriums.

THE ARCHITECTS DIRECTORY OF CALIFORNIA (Engineers; Architectural, Consulting, Electrical, Mechanical, Heating and Ventilating, Structural) Revised January, 1930, Published by Cornell T. Malone, Los Angeles; M. Morris, representative, 741 Pacific Bldg., San Francisco. Price $4.00.

An excellent directory for Southern California with a small amount of space devoted to the rest of the state.

STRUCTURAL PRACTICE IN SHEET METAL WORK—By The Trade Development Committee of the National Association of Sheet Metal Contractors of the U. S. A., 336 Fourth Ave., Pittsburgh, Pa.

This large volume of 768 pages containing sketches, photographs, details and drawings, as well as reading material, is a reference book for the use of architects, engineers, sheet metal contractors, installers of warm air heating systems and vocational training schools.

WROUGHT IRON (and its decorative use) By Maxwell Ayrton and Arnold Siecock, Fellows R. I. B. A. Published by Country Life, Ltd., 20 Tavistode St., Covent Garden, W. C. 2, London, and Charles Scribner's Sons, New York.

Large readable type and enhanced with some of the most beautiful photography of wrought iron examples obtainable. The illustrations include practically every type of ornamental and architectural wrought iron. The pages of this book should furnish inspiration for our American architects.

NEW BUILDING COMPANY

The present G. W. Williams Company is being reorganized under the name of G. W. Williams Company, Ltd. It is taking over the assets of the old concern. The stock set up of the new firm is 10,000 shares of common stock and 10,000 shares of preferred.

The sale of additional stock will provide funds for expansion and relieve the company from financing concerns that take a great deal of profit out of the building business when it is necessary to discount second mortgages with them. According to President G. W. Williams, the Peninsula is building up rapidly and his company wishes to maintain a leading place among the building concerns operating there.

AUSTIN COMPANY BUSY

New work by the Austin Company of California includes a large factory on 57th Avenue, Oakland, for the Cutler-Lobingier Packing Company, Ontario, California and a factory in Emeryville for the Edward R. Bacon Company of San Francisco.

TERMITES IN FRESNO

Presence in Fresno of termites, wood-boring insect, was disclosed by Curtis Neal, city building inspector, following an investigation of a dwelling house at 1239 Harrison Avenue, Fresno.

CONVENTIONS AND EXHIBITIONS

To May 15—Exhibition of European Photographs, Architects' Building, Los Angeles.
May 4 to June 1—Annual Exhibition of San Francisco Art Association, Palace of the Legion of Honor, San Francisco.
May 20-October 1—Exhibition of Modern Industrial and Decorative Arts, Stockholm, Sweden.
May 21-23—American Institute of Architects, sixty-third convention, Mayflower Hotel, Washington, D. C.
May 26-30—International Congress of Building and Public Works, London.
June 19-30—Pan-American Congress of Architects, Rio de Janeiro, Brazil.
September—International Architects' Congress, Budapest, Hungary.
October 10-11—Third annual meeting State Association of California Architects, Del Monte and Monterey, California.
November 18-29—Art Exhibition, Royal Institute of British Architects, London.

ARCHITECT; HOME BUILDER; MANUFACTURER—A TRINITY

By RAYMOND HAWLEY *in Pencil Points*

THE architect provides the plan— the home builder provides the money—the manufacturer provides the materials. Each is indispensable to the other; yet at times they seem to be working at cross purposes, or at least with less than that harmony or mutual understanding of interests that makes for the most efficient results.

Certain of the architects seem to have resented advertising on the part of manufacturers to home builders, whether of new structures or additions or alterations to present ones. Architects in some instances have objected to Mr. and Mrs. Home Builder knowing what they want and specifying it. Certain home builders have objected to seeming stubbornness or arbitrary attitudes on the part of architects. Certain manufacturers have objected to lack of cooperation on the part of architects, and so on. There seems to be some justification in the contentions of each.

The fact remains, though, that Mr. and Mrs. Home Owner are getting more up-to-date, modern, and better equipped homes in many ways than ever before. Advertising of the manufacturer to the consumer has been to a large degree responsible. True, where a manufacturer pleads his cause with great fervor, his products may have been used at the expense of eliminating certain construction features, which the architect regards as essential.

Certain architects have taken the stand that they are being put in the unpleasant position of being little more than purveyors of square feet; that their inspirational, aesthetic, and creative talents are permitted inadequate scope. Their ability to have a much freer hand is greatly aided by the advertising of certain manufacturers who so well appreciate that the merit of their appeal rests on beauty, as well as utility.

Beauty and design are just as essential as utility, if that dream house for which Mr. and Mrs. Home Owner have saved for so many years (and in many instances will be paying for long after occupancy) is to be a perpetual source of pride—a thing of beauty, a joy forever. With most, this building is a "once in a lifetime" proposition.

Let's look at the matter of builders' hardware and locks for a minute. This seems to have been one of the most difficult phases for the architect to have the home builder regard in its true perspective. To most home builders it has been just an "allowance" — a mere expense—worthy of only the most casual, if any consideration.

Nevertheless, hardware probably gets more active use than most anything else in the home. The hinges are swinging to and fro many times daily. The catches on the windows are being continuously fastened or unfastened; the mechanism of the locks must unfailingly and repeatedly function, and the locks must deny admittance to the unauthorized. The ornamental hardware on the outside, not merely provides security, but it is continuously exposed to the weather and storms. It must be of materials and finish impervious to the elements, if it is to retain its grace and charm. Then, too, the design should be in keeping with the house.

Seldom were the locks and builders' hardware determined upon by the owner, despite the architect's insistence, when the home was planned. In comparatively rare instances were they selected when the foundation was dug or when the frame work was pretty well along. Even then, all too infrequently, is brass or bronze hardware specified.

No, hardware is just an "allowance" to be slashed for this and for that. A larger automatic refrigerator is desired, lop something off the hardware; or a greater capacity heating plant, or this or that; just take it from the hardware "allowance." Even though the "allowance" was adequate initially, it frequently holds the world's record for shrinkage.

Despite opinions to the contrary, builders' hardware is decidedly conspicuous in the home; despite erroneous impressions it's just an ordinary and necessary feature. It can be the final element which makes or mars. If incongruous, with lack of harmony or suitability, its inconsistency can be absolutely glaring. Therefore, to increase their own sales, to strengthen the architect in his recommendations for hardware of

beauty, value and utility, and to educate the consumer on its importance, certain manufacturers are making noteworthy and profitable contributions to the general cause in their advertising.

Only in comparatively recent years have you seen much of a play on suitable builders' hardware in the home. Not only was the harmony of beauty and suitable metals neglected, but the vital protective element as well. The architect was unable to stem the thought in the consumer's mind that low price was the only determining factor.

There has, for instance, been a far greater use of brass and copper pipe, leaders, and gutters the past several years. It certainly was not news to the architect that such articles were a better buy for the home owner. Despite his knowledge, however, he had not been able to bring about popularity, purchase, and appreciation. It took consumer advertising by the manufacturers to do it.

The real aim in home building is not merely how much, but how good. The better the coordination of architect, owner, and manufacturer, the better the homes will be. The architect alone cannot possibly hope to educate the consumer, and he will find it most advantageous to view the manufacturer's advertising along broad-gauge lines.

Few intelligent home owners, parting with their hard-earned dollars, will close their minds to helpful suggestions and constructive, practical advice from capable architects, who acquire their wisdom and lore through painstaking education, study and experience. At the same time, the home builder who pays the bills, after friendly discussion, is entitled to what he wants. When a man knows what he wants and demands it, the responsibility is not then solely the architect's if things don't work out as anticipated.

The home builder, through his own personal business purchases, has learned the value of the trade-marked articles which tell their story honestly and continuously. He frequently wants trade-marked articles throughout his house and he is going to have them. He knows then that he does not have merely to rely on his own judgment or the judgment of his advisor. He knows that the manufacturer, through his national advertising and by his trade-mark sets his guarantee upon the commodity.

Architect, manufacturer, and home builder constitute a trinity. They have much in common, for the desire of each is better homes. While it doubtless is annoying frequently to architects to have home builders come in with preconceived notions which may be ridiculous, yet the advertising of the manufacturer on the whole has been decidedly beneficial to all.

KAWNEER-ZOURI JOIN FORCES

Merging of interests of the Kawneer Company and the Zouri Drawn Metals Company, both manufacturers of store fronts, was announced recently and the combination should work to advantage of the architect and consumer. The combined resources of the two companies will permit greater research in design and engineering, with consequent improvement in marketing and production facilities. Disastrous price cutting will be eliminated. Business connections with either company will experience no disturbance in their contractural relations. Charles M. Boynton will continue to direct the affairs of the Kawneer Company in California with main office and factory in Berkeley. In the announcement to the trade under date of April 7, Francis J. Flynn, president of the Kawneer Company and Lowell M. Chapin, president of the Zouri Drawn Metals Company, state that "through an exchange of stock, based upon average earnings of each company during the past five years, an affiliation has been consummated between the Kawneer Company, of Niles, Michigan, and the Zouri Drawn Metals Company, of Chicago Heights, Illinois.

"No additional financing is contemplated as a result of this affiliation since neither company has any funded indebtedness. After giving effect to the affiliation, the capital structure will be solely represented by non par value stock of the Kawneer Company.

"There are no changes contemplated in the management or policies of either company. The Zouri Company will retain its own identity and continue to operate its plant in Chicago Heights, Illinois, and Lowell Chapin as President of the Zouri Company will be in charge. In addition the Messrs. Lowell and Henry Chapin will become directors of the Kawneer Company. The Kawneer Company will be represented on the board of the Zouri Company."

SOULE BUYS MET-PROD-CO.

Announcement is made by Edward Soule, president of the Soule Steel Company, of their purchase of the United States Metal Products Company of San Francisco, manufacturers of the Met-Prod-Co line of steel windows, including steel factory sash, casements, double hung windows, French doors of all types, projecting windows, hollow metal sash, Sainometal fire doors and steel rolling doors.

No change will be made in personnel, and present marketing arrangements. In Los Angeles district. L. G. Bradfield will continue to handle sales, service and erection, while A. H. Meyn continues as head of the San Francisco sales.

WHAT THE SMALL BUILDER CAN LEARN FROM THE BIG BUILDER

By COLONEL WILLIAM A. STARRETT
in Building Age

EVERY five years 50 per cent of all contractors go out of business and that 50 per cent is composed largely of small contractors, not the large established builders. Does this not indicate that there is something wrong in many builders' operating technique? Does it not show that the large builder has acquired something in the manner of operation which carries him far on the road to success? Or aren't comparisons possible?

If there were anything in the nature of the small builder's work which differed radically from that engaged in by the big contractor we might be forced to conclude that no comparison was possible—that there was little in common between the problems faced by the two, but as I see it, the basic problem is the same, the difference being only in details.

The fundamental problem in building is management and the small builder may well study the operating technique of his big brother, for in the latter's ability to manage lies the secret of his success. The big builder knows that managerial ability is the keystone of good business, and by management he means "organized foresight."

Organized foresight or "prevision," as I like to call it, leaves nothing to chance. A skyscraper, for example, is constructed mentally from foundation to roof, long before the actual work begins. All the component operations which go to make a finished structure are thought out in detail much as a capable general plans the movement of troops and supplies in advance of a campaign. The big builder does so from necessity because it is imposed upon him by the very complexity of the work.

This same original foresight, so essential to large scale building, is equally essential for the small builder. It is not enought merely to hire the specialized workers who contribute to the building operation; one must manage them as well as coordinate their work. That in turn necessitates a knowledge of the science of contracting and contracting administration. It requires executive ability. The small builder needs to know sources of supply; to know the meaning of things called specifications. In short, he should be organized on the basis of rendering a service, for it is not enough just to get by.

Planning, everlasting planning, the ways and means are the constant concern of the builder.

Now a builder, to be any sort of a builder, must work to a time schedule prepared with forethought and out of his experience and ability, and I learned in my first job how this was done, and how all-important it is. Time, as well as money, is spent and both must be budgeted; and the drive is always to keep all branches of work approximately within the money budget and time schedule. Organized forethought is the very essence of building.

In money budgeting eighty per cent of the cost lies in the buy-out, the sub-contracts, such as steel, heating, ventilating, plaster and painting. Another ten per cent goes for commodity materials; sand, cement, brick and similar items. The remaining ten per cent is the builder's direct payroll, which usually includes the foundations, bricklaying, carpentry, etc.

The price of a structure having been estimated, the owner's interest is not how cheaply, but how well his agents work for him, so that the wise builder realizes he is working for the owner and not himself. Builders are not vendors of buildings, but merely expert managers and coordinators.

After the first two stages of business have been completed, the work in the architect's office and the letting of contracts, success depends on how well the builder can marshall the forces under his command. The capable builder is responsible for the whole progress of the work, and he stands between the sub-contractors and the sometimes capricious petulance of both the owner and the architect.

Despite the desire to obtain contracts, the best builder is not the one who can make the lowest estimate, although not a few builders lay claim to superiority because they can "figure closer" than anybody else. The fallacies here involved are at the root of many of the ills that beset the building business. Things cost what they cost, and not what some importunate opportunist hopes he can make them cost by blinking the facts of his problem.

In estimating, one of the popular misconceptions, even among builders who should know better, is that buildings may be estimated by so much per foot. A doctor does not diagnose a case by reading the clinical thermometer, but it helps; in the hands of an expert, cubic foot cost, likewise, may be a reasonably accurate method.

The best rule, and one generally accepted by the best builders, is to compute the cubic foot contents of a building by an arbitrary line drawn beneath the footings and above any special foundation construc-

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tion. Where special foundation conditions are to be met, they must be considered as an element of cost apart from any generalization as to cube.

However, even if a cubic foot price is agreed upon and a contract based upon it, there still remains the necessity for the builder to make an accurate detailed quantity survey of the operation and an estimate of the material and labor costs. This detailed estimating may seem like an interminable job, but there is no royal road to it, any more than there is to success itself.

As far as financial success is concerned, fortunes are not made out of building proper. It is an interesting commentary on the industry that is is economically the most disorganized of any with the possible exception of farming.

Competitive bidding reaches jungle ferocity and literally places the builder at the mercy of the customer. To make anything out of it at all, the builder is forced to grind down all or most of his sub-contractors. If he fails, he is playing with bankruptcy.

It sometimes happens, however, that a builder notes that a certain corner would lend itself to specific form of improvement, office building, store or apartment house. He looks about for a possible lessee, finds one who might consider it, seeks out the owner, suggests that a tenant might be found in advance, brings owner and prospect together, advises with them, takes the contract for construction and turns the completed property over to the owner at an agreed price or at cost plus his agreed fee.

Any builder might well follow out that system in a small town. Curiously enough, small town skyscrapers often justify themselves financially, despite the fact that land is comparatively cheap. The reason for this is that the added prestige, together with their more modern conveniences, quickly empties the older and outmoded office buildings of the city.

The field of the small builder is by no means limited to the suburbs; there are great opportunities for him in the metropolitan districts proper. There is much construction which the big builder cannot handle as expeditiously, simply because of his size. These smaller projects need contractors who can manage ably, for both time and costs are factors as with the large enterprise. They need the management of builders who are organized to give a genuine service. And to the extent that the small builder achieves the goal of service through "prevision" he will grow in size and in strength.

MODERNE ORNAMENT

National Terra Cotta Society, 230 Park Avenue, New York, announces publication of four plates of "Moderne Ornament" and four construction details which are available to readers of this magazine by communicating with the Society. Following is a copy of the announcement:

"Two things are of outstanding interest to the architect—design and construction details.

"Design sets the architect's work apart from that of his fellows.

"Well considered construction details insure his work permanence and satisfactory performance.

"The National Terra Cotta Society has therefore had prepared an extensive series of construction detail plates covering those traditional elements of design which may almost be called the alphabet of architecture.

"These details are largely taken from work actually executed, the construction having been studied and checked in a nation-wide effort to picture the best in terra cotta construction practice. Many architectural periods and multitude of construction details are included in the series.

"The so-called "art moderne" is still largely unfixed in form, and therefore no attempt has been made at the impossible task of reducing it to "standard" detail construction drawings. The National Terra Cotta Society, however, is continually receiving from its members copies of the photographs of the clay models they submit to the architects for approval. These, naturally, are all for contemporary work, and represent a fair cross section of modern trends in design. These will be grouped into photographic plates and mailings made from time to time during the year.

"Obviously, the construction for "modern" design will be the same as shown in the detail drawings for conventional elements having the same structural character, or occupying the same position in the building."

OIL HEATING AIDS HEALTH

Heating the American home has developed into an industry that deserves to rank with transportation, light and power as a Public Service, said E. M. Fleischmann of Baltimore, President of the American Oil Burner Association, in an address at the seventh annual convention of that organization, held April 9-10 in Chicago. The heating engineer and the manufacturer and distributor of modern heating equipment, he pointed out, are largely responsible, during eight months of the year, for the health, comfort and convenience of 100,000,000 people.

"The most important advance in this industry during the past ten years," said Mr. Fleischmann, "was the perfection of equipment that has made the modern central heating plant an automaton operating practically without human supervision. The modern 'furnace man' is the thermostat. The modern fuel is oil. The up-to-date housewife fills her fuel oil tank, sets her thermostat at the degree of heat her family prefers, and, to all intents and purposes, forgets her heating plant for the rest of the winter.

"In homes where the old hand-fired coal furnace still reigns, the program is somewhat as follows:

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When the family rises in the morning, the man of the house shuffles down cellar in slippers and dressing gown and opens all the drafts. Then he goes to business, and by about ten o'clock the rise in outdoor temperature has made the house uncomfortably warm. This temperature prevails until someone shuts off the furnace drafts. Then the fire subsides and two hours later, perhaps, it has to be poked up again. During most of the day, and especially in the late spring and early fall, the majority of American houses are too warm, not only for comfort but also for health. When the man of the house returns at night he usually gives the furnace another shake and opens the drafts again, and the evening is spent in the same superheated temperature. Then the furnace is banked for the night. While the family is asleep the interior walls usually become so cold that more fuel is wasted in warming up the house again in the morning.

"However carefully a household furnace is regulated by human attention, it is next to impossible to maintain an even temperature. Physicians and economists have recognized this fact and have encouraged manufacturers of heating machinery to perfect automatic controls. The thermostat, operating by electricity and maintaining indoor temperature at any desired degree, meets this problem and is, in fact, the only solution.

"In heating science we Americans are far ahead of any other nation. Sixty per cent of the world's entire production of fuel oil is used here. While by far the greater portion is burned to furnish energy for railroads, steamship lines, power plants and factories, the consumption of the lighter grades of oil used for heating buildings is rapidly growing. During the year 1928, 13,967,000 barrels of fuel oil were consumed for heating residences, as compared with 11,709,000 barrels during the previous year and about 3,000,000 during 1923. During the same period, the consumption of coal for heating residences has practically stood still. During 1929, American home owners bought 130,000 domestic oil burners representing a total investment of approximately $100,000,000. This expansion of the oil burner business is remarkable because it took place during a year when building operations showed a decrease. Somewhat over half a million automatic oil burners are now installed in American homes."

UNIVERSAL ATLAS OFFICIALS

Appointments in the sales department of the Universal Atlas Cement company, a subsidiary of the United States Steel Corporation are announced by F. L. Stone, general sales manager. The company was formed through the union of the former Atlas and Universal organizations. The sales appointments follow:

O. H. D. Rohwer, heretofore division sales manager of the Universal Atlas company, is appointed an assistant general sales manager. A. C. Cronkite, who

FERALUN
ELEVATOR THRESHOLDS

Combine Architectural Harmony With Durability and Anti-Slip Effectiveness

From practical and architectural standpoints, Feralun Thresholds are greatly favored. They afford real protection against slipping accidents, which is attested by the fact that Feralun carries the Underwriters Label.

Feralun Thresholds enhance the appearance of entrances. Gunn, Carle & Co., Ltd., will assist you in securing any design of tread-form to harmonize with the surroundings in which it is to be used.

GUNN, CARLE & CO., LTD.

444 Market Street San Francisco

SU tter 2720

GUNN, CARLE & CO. LTD. INDUSTRIAL SUPPLIES BUILDING MATERIALS

DRINKING FOUNTAINS A MEMORIAL TO OUR NATION'S HEROES

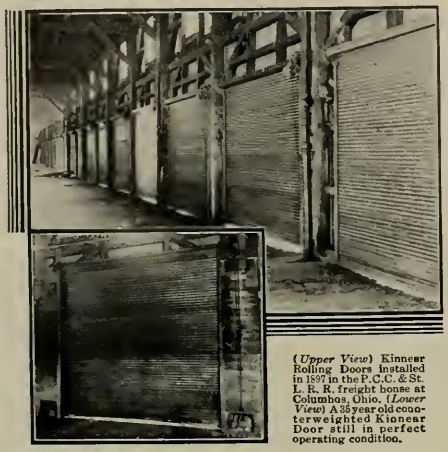
Eight—Model 7 B, Haws Drinking Fountains

THIS classic fountain, erected by the citizens of Ashland, Oregon, is supplied with the natural lithia water for which the city is famous. Electrically cooled, the water may be drawn from any one of the eight fountains which comprise the unit. Just another example of the varied uses to which the **Haws Sanitary Drinking Fountains** may be adapted.

HAWS SANITARY DRINKING FAUCET COMPANY

1808 HARMON STREET BERKELEY, CALIFORNIA

TIME — THE ACID TEST



(*Upper View*) Kinnear Rolling Doors installed in 1897 in the P.C.C. & St. L. R. R. freight house at Columbus, Ohio. (*Lower View*) A 35 year old counterweighted Kinnear Door still in perfect operating condition.

Still on the job after a third of a century's continuous service . . .

Durability in rolling doors is on extremely important consideration when deciding on equipment of this kind. But durability, plus perfect and uninterrupted performance is even more important.

Photographically all rolling doors are very much alike (the appearance of Kinnear Rolling Doors has been very cleverly imitated). But, only Kinnears have proven their ability to function just as smoothly after thirty years as the day they were installed.

As a rule, the genuine article is not only more satisfactory, but actually cheaper in the long run. Kinnear Rolling Doors are no exception.

The new Kinnear Rolling Door Catalog is mailed free on request. Kinnear Engineering and Estimating Service is available without charge or obligation.

kinnear
ROLLING DOORS

THE KINNEAR MANUFACTURING CO.
661-671 Field Avenue, Columbus, Ohio, U. S. A.

Boston Chicago Cincinnati Cleveland Detroit New Orleans
New York Philadelphia Pittsburgh Kansas City Washington

has been assistant general sales manager, continues in that position. The new appointment is due to the increased business caused by the joining of the Universal and Atlas organizations. Mr. Rohwer for twenty years was connected with the former Universal Portland Cement company. Starting in the St. Louis office in 1907, he was successively salesman, special representative on contract work, special representative in Kentucky and in Detroit, and division sales manager with territory in Wisconsin, Iowa, Kentucky and Tennessee.

Before going to Universal he was with the Missouri Pacific railroad for ten years in various departments. Mr. Rohwer will have his office with the headquarters of the Universal Atlas company in Chicago.

N. A. Kelly, previously sales manager at New York for the former Universal Portland Cement company, is appointed to the same position with the enlarged organization. He was associated with the sales department of the Universal company for eighteen years. He began in 1911 as sales representative in New York state, working out of the Pittsburgh office.

A. O. Stark, appointed assistant sales manager at New York for the Universal Atlas company, was connected in a sales capacity with the former Atlas company for more than twenty years. As assistant eastern sales manager and export manager for Atlas, his activities were chiefly in eastern territory and in foreign fields. Prior to the war he was placed in charge of the exportation of Atlas products and since that time has continued his supervision of export activities.

William A. McIntyre, for eleven years a sales executive for the former Atlas company and experienced both in engineering and in selling, has been appointed to direct the sales forces working out of Philadelphia for the Universal Atlas company.

HALF A CENTURY IN BUSINESS

The building trade is paying tribute to Henry M. Toch, pioneer in the damp-proofing industry, who is celebrating the fiftieth anniversay of his association with the long-established firm of Toch Brothers, manufacturers of water-proofing and damp-proofing compounds and technical paints. Mr. Toch is still active.

Mr. Toch entered his father's business on June 17th, 1880, when it was established at 35 Bowery, New York City. That business already had existed for 32 years and had won a place of importance in the industrial and constructional phases of American life.

Mr. Toch's work with Toch Brothers has been not only as principal executive, but also as financial administrator and controller for the company since his association with it. Some idea of the increasingly large responsibility of this function can be gained from the fact that Toch Brothers' operations have consistently expanded from the earlier and limited quarters at 35 Bowery to a business that has distribution in domestic and foreign markets throughout the world.

ARCHITECT AND ILLUMINATING ENGINEER

As a result of the increasing use of light for utilitarian illumination and decorative purposes, the architectural profession and the illuminating engineer are being brought into ever closer relationship. From time immemorial, the architect has conceived his creations in respect to lights and shadows which will be produced by daylight, and in recent years, since the illuminating engineer has entered the picture, the architect has been somewhat disturbed at effects produced on his structures at night by flooding them with artificial illumination. The effects produced under these conditions have generally been entirely different from the architect's pre-conceived ideas and he sometimes feels that instead of producing pleasing results, the illuminating engineer has detracted from his conception of his building as originally planned.

The Illuminating Engineering Society believes that in order to be of real service to the architect, the illuminating engineer must know more about the architect's problems and be able to talk to the architect in his own language. To accomplish this purpose two courses in the fundamentals of architecture for illuminating engineers are being organized by the Society to be held concurrently in the early fall.

One of these courses, limited to 75 registrations, will be held at the Architectural League Club House, New York City, under the auspices of Columbia University, September 8 to 13, inclusive; and the other, limited to 100 registrations, will be held concurrently at the Art Institute, Chicago, by the Schools of Architecture of the University of Illinois and the Armour Institute.

Both courses will consist of two lectures each day for five days, in the fundamentals of architecture and allied subjects, by professors of architecture of the respective Universities. After lunch each day, the groups will be addressed by prominent architects and they will then be taken on inspection trips to interesting buildings. On the morning of the sixth day, a general open forum will be held to summarize the work.

A nominal fee of $25.00 will be charged for registration and this will cover all expenses, including transportation for inspection trips.

Complete information with syllabus of the lectures will be distributed at an early date and registrations for the courses will be accepted from members of the Illuminating Engineering Society on receipt of the registration cards attached to the syllabus.

The architect and the illuminating engineer both have their ideals, and architectural courses as planned by the Society will undoubtedly bring about a mutual understanding and respect of the problems and aspirations of each as they affect the use of artificial light.

EMPIRE SECRETAIRE À ABATANT IN THE PRIZED 'HONEY AND GOLD' OF THIS PERIOD. THE HINGED FALL-FRONT ENCLOSES AN INTERIOR OF SMALL DRAWERS AND COMPARTMENTS. THE ORMOLU MOUNTS ARE OF UNSUALLY FINE QUALITY AND THE PIECE IS IN ORIGINAL CONDITION.

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INTERPRETATIONS

AND INDIVIDUAL AND
EXCLUSIVE DESIGNS

Gump's

HONOLULU SAN FRANCISCO

Example of the fine woodworking easily achieved with Port Orford Cedar—the entrance hall of the S. Mitau residence, Atherton, California. The entire house is finished with Port Orford Cedar. Gordon B. Kaufmann, Los Angeles, Architect.

This
cream-white cedar
makes a good job of any interior

Pacific Coast architects are finding Port Orford Cedar an excellent wood for *all* interior trim.

Its satin-smooth, cream-white surface takes enamel easily and with a beautiful porcelain-like luster. No trace of grain shows through. No crinkles or blisters appear. Enamel holds for years. Stains, too, work easily into this fine wood and reflect true, even, warm tones.

Light and pliable, Port Orford Cedar works easily and speedily. Never splinters, warps, or twists. Contains no knots, pitch or rosin. For special designs, it machines easily to sharp, clean-cut edges.

Your lumber dealer or millwork house has Port Orford Cedar lumber and plywood or can obtain it promptly. You'll find our illustrated booklets valuable. Mail the coupon for them today.

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MARSHFIELD, OREGON

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The Aristocrat of Woods

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Please send me "Fine Interiors with Port Orford Cedar" by Wade Pipes, A.I.A.

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TOO FEW CRAFTSMEN FOR BUILDING TRADE

(Southwest Builder and Contractor)

Seven general contractors at the convention of the California State Builders' Exchange at Long Beach said they had no mechanics in their employ under 30 years of age. One contractor estimated the average age of skilled workers in the building trades at 55 years. These statements may represent an extreme of the situation in the building crafts, but they indicate the seriousness of the problem with which the building industry will sooner or later have to cope. The building trades evidently are no longer attractive to the average youth. Most boys with a mechanical bent want to be electricians or automobile mechanics. Too many aspire to white collar jobs, the contractors complain.

What can be done to make the building trades more alluring to ambitious youth? That is a question that must be taken up and considered seriously at no distant day. Machinery has solved the labor problem in some industries. But there are many things which cannot be done by machines, even though they appear to operate with almost human intelligence; and this is particularly true in the construction industry. Human understanding and judgment are essential as well as mechanical skill. Wielding a trowel, a hammer or saw may appear to be a simple task. But without brains to direct their use, these may be made implements of waste or destruction as well as construction.

At one time the apprenticeship system served to keep the ranks of all skilled trades filled. The trade was handed down from father to son and the apprentice was content to receive the cost of his keep. But boys are no longer satisfied with meager wages that apprentices formerly received and contractors are loath to pay what they consider more than apprentice services are worth. Besides construction as a rule does not offer continuity of employment to the extent that prevails in some other industries, and it offers no sinecures.

The present is far more important to the average boy today than the future. What his father did is no precept for him. He sees what he thinks and believes to be shorter cuts to lucrative employment. And it is a common and not an unnatural failing for the father to wish his son a better lot than has fallen to him. So the youth is encouraged in his desire to seek another vocation and particularly one that promises quicker and more attractive rewards. But he generally finds that wherever his energies are directed his progress is measured by his ability to take advantage of his opportunities and that there is no primrose path to success.

Analyzing the problem of thinning ranks in the building trades it is difficult to absolve those engaged in the construction industry from a certain responsibility for it. Too many contractors lack the faith which they should have in their business. They complain of

their inability to get ahead. Too many are struggling to make a mere living in it, they are prone to say, and there are no opportunities within the range of their vision. The more they talk and think about it the worse it looks to them and they spread pessimism and gloom. Finally they are firmly convinced that if they had gone into some other business and worked half as hard and put in half as much time they would have been much better off, if, indeed, they had not made a real success.

If those engaged in the contracting business have no faith in it and are constantly harping on the difficulties which beset it and the lack of opportunities, how can they expect ambitious boys looking about for a start in life to think well of it? Why should a boy be asked to even consider a vocation in which there is no hope for him to progress? And why should he waste his days when he should be laying the foundation for better things to come without any immediate adequate compensation, to say nothing of the future?

As a matter of fact, there is no better or more honorable field of endeavor than construction. Everyone that lays a hand to it is contributing to the welfare of his fellowmen, adding to the wealth of his country and creating monuments to his industry and skill. Conditions in the construction industry are far from being ideal, or even what those most easily satisfied could wish them to be. But this industry has no monopoly on the ills that those engaged in it most complain of—irresponsible and dishonest competition, unfair treatment, price cutting and lack of opportunities. These ills belong to most, if not all, other industries in a greater or less degree. And those engaged in any one of the other industries probably consider they are not as well off as those engaged in construction.

We sometimes wonder if contractors take their business as seriously as they should. It's an old, old gag that no one ever gets a contract except by making a mistake in his bid. But does the contractor really feel that way about it? Does he honestly believe his business is only a gamble, as he is so fond of saying? If he doesn't consider that his estimate is sometimes right when he gets a job and that his knowledge, experience and skill are important in his business, does he have the right mental attitude toward it?

When those engaged in construction begin to show a little more faith in their business, talk less of their individual troubles and make more of their opportunities—yes, and sacrifice a little more of their common weal—then they will be on their way to make construction alluring to the youth looking about to get a start in life. And right there is where the responsibility of contractors lies in meeting the problem of thinning ranks in the building trades. Vocational education and apprentice schools, no matter how good they may be, will avail little in the solution of the problem, unless the boy seeking a trade can be convinced that construction is at least on a par with the other industries in its present and future opportunities.

OAK FLOORING

like this has beautiful texture

The texture and pattern of "Perfection" Brand Oak flooring make possible a finish that is seldom found on any other flooring. You can depend upon "Perfection." In modern plants operated by skilled lumbermen, only the finest oak is selected. After prompt seasoning and kiln-drying, it is perfectly milled and matched so that it lays smooth and stays smooth. It is graded and handled so carefully that upon arrival anywhere, it is always in perfect condition. Leading lumber dealers gladly feature this nationally advertised brand.

ARKANSAS OAK FLOORING CO.
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"PERFECTION"

Brand Oak Flooring

Specify

"Perfection" Brand Oak Flooring, Blocks and Planks, may be obtained chemically treated by the *CELL izing process.

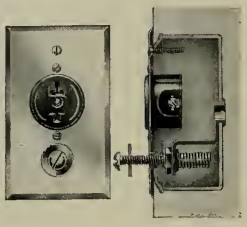
There's a size and grade for every type of structure, new or old. Ask your architect or building contractor for an estimate.

Fan Hangers

Think of them Now

Dispose of the fan equipment problems now. Install, as part of the permanent wiring job, Ⓕ Fan Hanger Outlets. They provide a safe, attractive, unobtrusive and efficient outlet for fan service and eliminate the unsightly and dangerous wall brackets, shelves, standards and other makeshift arrangements.

When fans are in use they are securely supported by a heavy steel bolt, with a universal T type outlet for current. Out of use, out of sight practically, and ready at all times.



Anticipate the Need

Ⓕ Fan Hangers belong in nearly every electrical specifications. In addition to Fans they are being widely used for picture lights, bowl type heaters, and show window spotlights. Radio finds use for them for loud speakers in various locations and many public address systems are so served.

Wherever you need a support and an outlet combined here is the answer. Made also in a type that fits a standard outlet box.

Ask your nearest Ⓕ man about them. Look in Sweets or send for descriptive literature. Easy to use, highly pleasing to owners and one thing less to worry about.

Frank Adam
ELECTRIC COMPANY
ST. LOUIS

District Offices in all Principal Cities

ARCHITECTURAL LIGHTING CONFERENCE

Closer working relations of architects and illuminating engineers in the interest of modern efficient illumination in all types of buildings, was the keynote of the Architectural Lighting Conference held recently at the Westinghouse Lighting Institute, Grand Central Palace, New York City. The meeting, which was the first joint session of these two factors in illumination, was held under the auspices of the Commercial and Industrial Lighting Committee of the National Electric Light Association.

For three days representatives of the Electrical Industry, Architects, and Illuminating Engineers spoke on the relation of their work to that of lighting in architecture. "The increasing use of light for utilitarian illumination and decorative purposes is bringing the architectural profession and the electrical industry into ever closer relationship," said W. H. Horton, Chairman of the Commercial and Industrial Lighting Committee of the N. E. L. A., in opening the conference. "Each has ideals of service; the architect to his clients, the electrical industry to the consumer of its product."

A large daily attendance at the conference showed active interest in the thoughts expressed by the various speakers. Earl Whitehorne, President, Electrical Association of New York, Inc., in his address on "Mutual Understanding of Each Other's Problems a Prerequisite to all Cooperative Efforts" told exactly how the architect and engineer could and should cooperate. Speaking of the engineer, he said:—

"I believe he needs the thinking of the architect just as much as the architect needs a little more of the engineer's cooperation and help because the illuminating engineer and other electrical people are slaves to the slide rule. He is absorbed in his technique; he has got to escape from it; he has got to begin to appreciate that the work that is worthwhile is not the mere fabrication of a lot of materials, but the giving expression through that fabrication to some contribution to human happiness and comfort and progress. I think he has got to lay aside his lumens and his watts to a very considerable extent and begin to recognize that in working buildings, comfort, beauty and facilities for service are the objectives and that the watts and lumens and the brass piping and other material elements of his work are, after all, just a means toward a very desirable end."

Mr. Whitehorne advised the architect of his part in the desired cooperative effort: "When an architect contributes to the building of one of the great monumental structures here in New York, and doesn't look forward and provide a capacity in his feeders, for example, that will be adequate to take care of the needs of the people who are going to inhabit that building, not today, but five years from now, he has

failed in the responsibility and trust that has been put upon him," he said.

"When an architect builds a building and doesn't put in a sufficient amount of outlets into an apartment house so that the standards of living five years from now will be satisfied, because five years from now people are going to be using more electrical equipment than they do today as a common necessity of living, then he has failed to have the courage to do a job that is built for progress, and an illuminating engineer who is willing to go forward just because the architect will let him, and install brass tubing and sockets and this and that without any regard to the changing disposition of people toward the acquisition of beauty in the things with which they are surrounding themselves, is simply not living up to the responsibility of his profession. It is a tragedy when a building is almost verging on obsolescence when completed and when the tenant goes in."

In a talk on "The Importance of Artificial Light to Architecture," Wallace Harrison of Corbett, Harrison and MacMurray, New York architects, told his impressions of this relationship between architects and engineers and described the new trend in thought of progressive architects relative to the part that light plays in modern construction. He said:—

"On the question of the engineer's relation to the architect, the architect really needs the engineer more today than he ever has, because in all our living conditions we are going indoors, we are going inside of buildings, we are living inside without any exterior light at all. I think as things develop we will do it more and more. Especally down in Wall Street you find nothing but exterior space that is lighted and the architect doesn't know anything about this lighting. He has to go to an illuminating engineer to find out how he can light the space. But, on the other hand, the illuminating engineer, in order to do it intelligently, should know a great deal about architecture.

"Then, too, the architects are a little bit at a loss because they don't know a thing about illuminating engineering. If you could find a system of telling the architects how and why and what the new systems are going to be, you would help us a great deal. More and more the architect has to give up doing certain forms of work and specialize in one thing. Recently we have had a very good time specializing on theaters and concert halls which have to be lighted entirely from the inside, with no exterior light at all. That has brought up the question of what we could use and how we would go at it.

"You have developed new systems of changing the colors of a room. When you change the colors in the lighting, that means that we can't get too gay with our colors in the form of decoration. That is, if you are going to paint your pictures on the wall in all the colors of the rainbow, then we get nowhere and we have nothing but a puzzle.

Satisfactory Wood Floors Over Concrete Through the Bull Dog Method

STEP FOUR—LEVELING UP. *Before nailing, necessary leveling with straight edge is quickly accomplished. Joints come within clips and both ends are nailed.*

THE Bull Dog Method and process of anchoring wood floors over concrete provides a level wood floor that will be permanently satisfactory—and free from buckle and dome.

In addition, Bull Dog Floor Clips ***eliminate dry rot***, doubling floor life; reduce dead load 18,000 lbs. to 1,000 square feet of slab area; save construction time because there's no fill to dry, no beveling or shimming, and sleepers and finished floor are laid at one time. The Junior Clip (5/8" wide) may be used with or without a fill (dependent on the service duty of the floor.) When a fill between the sleepers is desired, any cheap, inexpensive mix such as sand, cinders or cinder concrete can be used.

Millions of BULL DOG FLOOR CLIPS on over 8,000 jobs carry testimony of satisfaction. Made for 2, 3 and 4 inch sleepers. Regular and Junior Styles. Friction tight nailing facilities (nails gratis.) Write for catalog and samples.

THE BULL DOG FLOOR CLIP CO.
108 N. First Ave., Winterset, Ia.
135 Representatives—15 Warehouse Stocks

BULL DOG Floor Clips

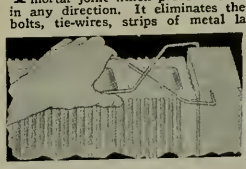
REGULAR CLIP—*3 sizes, 2, 3 and 4 in. 20 gauge galvanized iron.*

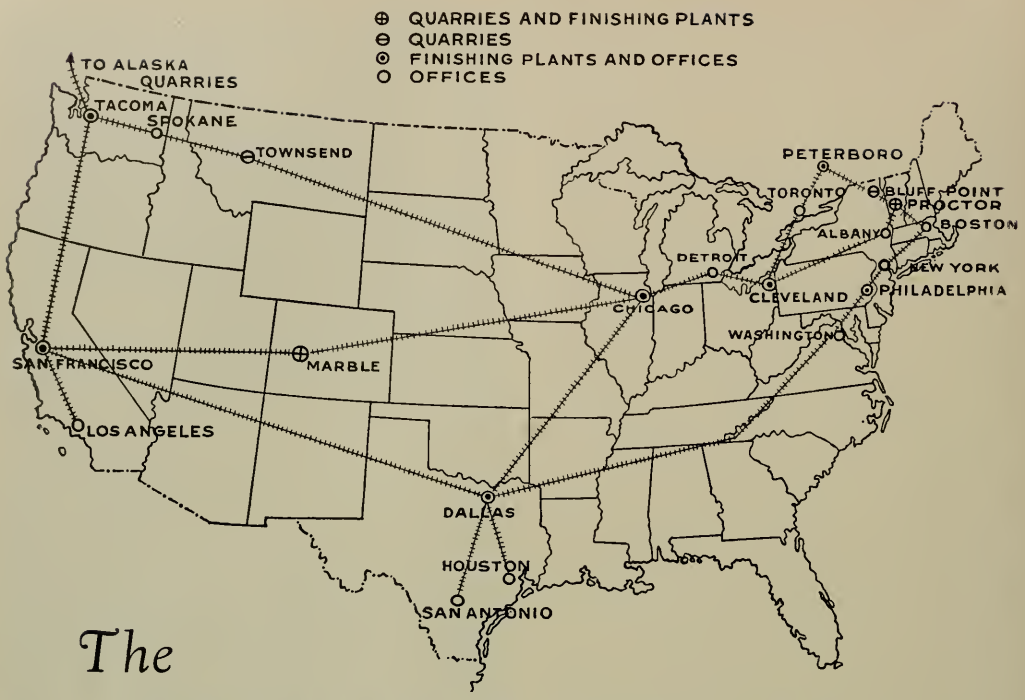
Original Patent granted June 14, 1921
Reissue Patent granted June 29, 1924
Process Patent granted May 19, 1925

JUNIOR CLIP—*3 sizes, 2, 3 and 4 in. 18 gauge galvanized iron.*

The Bull Dog Buck Anchor

THE Bull Dog Buck Anchor forms a rigid truss in the mortar joint which prevents the movement of the buck in any direction. It eliminates the use of nails, screws, bolts, tie-wires, strips of metal lath and iron, and all pounding against the back sides of the buck. Made in three widths of No. 10 Galvanized Steel Wire: 3 in., 4 in., 6 in. Ten per cent of anchors in packing cases are shorts to take care of spaces too short for the regular size anchor.





The

MARBLE TRAIL

Like the westward march of the pioneers, the marble trail leads to the Pacific Coast. It also stretches up into Canada, even to far-away Alaska. Bases established at strategic points provide the building industry with a nation-wide service.

From our quarries in Vermont, New York, Colorado, Montana and Alaska come many kinds of marble. This output is finished partly in our Pacific Coast plants with their complete finishing facilities, at our main plants in Vermont and also in our other large city finishing plants. In addition to that, we finish and install all kinds of foreign marble.

This means a complete service, one that reaches to all parts of the country. It means direct contact and ready information for architects and builders wherever they may be. In short, it means convenience, promptness and dependability.

VERMONT MARBLE COMPANY

PROCTOR, VERMONT

San Francisco :: Los Angeles :: Tacoma :: Spokane

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts quoted are figuring prices and are made up from average quotations furnished by material houses to three leading contracting firms of San Francisco.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

Overtime in wage scale should be credited with time and a half, Sunday and holidays double.

Bond—1½% amount of contract.

Brickwork—
Common, $32 to $38 per 1000 laid, (according to class of work).
Face, $90 to $115 per 1000 laid, (according to class of work).
Brick Steps, using pressed brick, $1.10 lin. ft.
Brick Walls, using pressed brick on edge, 75c sq. ft. (Foundations extra.)
Brick Veneer on frame buildings, $ .90 sq. ft.
Common, f.o.b. cars, $14.50 plus cartage.
Face, f.o.b. cars, $55.00 per 1000. carload lots.

HOLLOW TILE FIREPROOFING (f.o.b. cars in carload lots).

3x12x12 in.	$ 96.00 per M
4x12x12 in.	108.00 per M
6x12x12 in.	156.00 per M
8x12x12 in.	255.00 per M

HOLLOW BUILDING TILE (f.o.b. cars in carload lots).

8x12x5½	$108.00
6x12x5½	74.00

Composition Floors — 18c to 30c per sq. ft. In large quantities, 18c per sq. ft. laid.
Rubber Tile—65c per sq. ft.

Terazzo Floors—50c to 60c per sq. ft.
Terazzo Steps—$1.50 per lin. ft.
Mosaic Floors—80c per sq. ft.

Concrete Work (material at San Francisco bunkers) — Quotations below 2000 lbs. to the ton.

No. 3 rock, at bunkers	$1.40 per ton
No. 4 rock, at bunkers	1.40 per ton
Eliott pea gravel, at bnkrs.	1.40 per ton
Washed gravel, at bnkrs.	1.40 per ton
Eliott top gravel, at bnkrs.	1.40 per ton
City gravel, at bunkers	1.40 per ton
River sand, at bunkers	1.00 per ton
Delivered bank sand	1.00 cu. yd.

Note—Above prices are subject to discount of 10c per ton on invoices paid on or before the 15th of month, following delivery.

SAND
Del Monte, $1.75 to $3.00 per ton.
Fan Shell Beach (car lots, f.o.b. Lake Majella), $2.75 to $4.00 per ton.
Cement, $2.44 per bbl. in paper sks.
Cement (f.o.b. Job, S. F.) $2.64 per bbl.
Cement (f.o.b. Job, Oak.), $2.64 per bbl.
Rebate of 10 cents bbl. cash in 15 days.
Atlas "White" .....$ 8.50 per bbl.
Forms, Labors average 22.00 per M.
Average cost of concrete in place, exclusive of forms, 28c per cu. ft.
4-inch concrete basement floor.....13c to 14c per sq. ft.
4½-inch concrete basement floor.....14c to 15c per sq. ft.
2-inch rat-proofing.....6½c per sq. ft.
Concrete Steps.....$1.26 per lin. ft.

Dampproofing—
Two-coat work, 20c per yard.
Membrane waterproofing—4 layers of saturated felt, $5.50 per square.
Hot coating work, $2.00 per square.

Electric Wiring — $3.00 to $9.00 per outlet for conduit work (including switches).
Knob and tube average $2.25 to $5.00 per outlet, including switches.

Elevators—
Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2500; direct automatic, about $2400.

Excavation—
Sand, 60 cents; clay or shale, $1.00 per yard.
Teams, $10.00 per day.
Trucks, $21 to $27.50 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—
Ten-foot balcony, with stairs, $65.00 per balcony.

Glass (consult with manufacturers)—
Double strength window glass, 15c per square foot.
Quartz Lite, 50c per square foot.
Plate 80c per square foot.
Art, $1.00 up per square foot.
Wire (for skylights), 27c per square foot.
Obscure glass, 25c per square foot.
Note—Add extra for setting.

Heating—
Average, $1.80 per sq. ft. of radiation, according to conditions.

Iron—Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg.site)
Common, $23.00 per M (average).
Common O. P. select, average, $30.00 per M.

1 x 6 No. 3—Form lumber	$20.00 per M
1 x 4 No. 1 flooring	42.00 per M
1 x 4 No. 2 flooring	40.50 per M
1 x 4 No. 3 flooring	35.00 per M
1 x 6 No. 2 and better flooring	41.00 per M
1¼ x 4 and 6 No. 2 flooring	50.00 per M

Slash grain—

1 x 4 No. 2 flooring	$35.00 per M
1 x 4 No. 3 flooring	33.00 per M
No. 1 common run to T. & G.	30.00 per M
Lath	4.50 per M

Shingles (add cartage to prices quoted)—

Redwood, No. 1	$ .90 per bdle.
Redwood, No. 2	.75 per bdle.
Red Cedar	.90 per bdle.

Hardwood Flooring (delivered to building)—

13-16x3¼" T & G Maple	$135.00 M ft.
1 1-16x2¼" T & G Maple	145.50 M ft.
⅞x3½ sq. edge Maple	132.50 M ft.

	13-16x2¼" T&G	⅝x2" T&G	5-16x2" Sq. Ed.
Clr. Qtd. Oak	$220.00 M	$160.00 M	$175 M
Sel. Qtd. Oak	150.00 M	122.00 M	131 M
Clr. Pla. Oak	156.00 M	110.00 M	113 M
Sel. Pla. Oak	132.00 M	79.00 M	97 M
Clear Maple	147.00 M	101.00 M	
Laying & Finishing	16c ft.	15c ft.	13c ft.

Wage—Floor layers, $9.00 per day.

Building Paper—

1 ply per 1000 ft. roll	$4.00
2 ply per 1000 ft. roll	6.00
3 ply per 1000 ft. roll	9.25
Sash cord com. No. 7	$ 1.05 per 100 ft.
Sash cord com. No. 8	1.20 per 100 ft.
Sash cord spot No. 7	1.75 per 100 ft.
Sash cord spot No. 8	1.10 per 100 ft.
Sash weights cast iron	67.00 ton

Nails, $3.25 base.
Belgian nails, $3.00 base.

Millwork—
O. P. $80.00 per 1000. R. W., $85.00 per 1000 (delivered).
Double hung box window frames, average, with trim, $6.00 and up, each.
Doors, including trim (single panel, 1¾ in. Ore. pine) $6.75 and up, each.
Doors, including trim (five panel, 1¾ in. Oregon pine) $6.00 each.
Screen doors, $3.50 each.
Patent screen windows, 20c a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., $5.50 each.
Dining room cases, $6.50 per lineal foot.
Labor—Rough carpentry, warehouse heavy framing (average), $11.00 per M.
For smaller work, average, $22 to $30 per 1000.

Marble—(Not set), add 50c to 65c per ft. for setting.

Alaska	$1.40 sq. ft.
Columbia	1.40 sq. ft.
Golden Vein Yule Colo	1.70 sq. ft.
Pink Lepanto	1.50 sq. ft.
Italian	1.75 sq. ft.

Tennessee	1.70 sq. ft.
Verde Antique	3.00 sq. ft.

NOTE—Above quotations are for ⅞ inch wainscot in large slabs f.o.b. factory. Prices on all other classes of work should be obtained from the manufacturers.

Floor Tile—Set in place.

Verde Antique	$2.50 sq. ft.
Tennessee	1.50 sq. ft.
Alaska	1.35 sq. ft.
Columbia	1.45 sq. ft.
Yule Colorado	1.45 sq. ft.
Travertine	1.60 sq. ft.

Painting—

Two-coat work	30c per yard
Three-coat work	40c per yard
Whitewashing	4c per yard
Cold Water Painting	8c per yard

Turpentine, 90c per gal. in cans and 75c per gal. in drums.
Raw Linseed Oil—$1.36 gal. in bbls.
Boiled Linseed Oil—$1.39 gal. in bbls.

Carter or Dutch Boy White Lead in Oil (in steel kegs)

Per. Lb.
1 ton lots, 100 lbs. net weight 12¾c
500 lb. and less than 1 ton lots 13c.
Less than 500 lb. lots 13½c.

Dutch Boy Dry Red Lead and Litharge (in steel kegs)

1 ton lots, 100 lb. kegs, net wt. 12¼c
500 lb. and less than 1 ton lots 12½c
Less than 500 lb. lots 13c

Red Lead in Oil (in steel kegs)

1 ton lots, 100 lb. kegs, net wt. 12¼c
500 lb. and less than 1 ton lots 14c
Less than 500 lb. lots 14¼c

Note—Accessibility and conditions cause wide variance of costs.

Patent Chimneys—

6-inch	$1.00 lineal foot
8-inch	1.50 lineal foot
10-inch	1.85 lineal foot
12-inch	2.10 lineal foot

Pipe Casings — 14" long (average), $7.50 each.

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.40
2 coats, lime mortar hard finish, wood lath	.52
2 coats, hard wall plaster, wood lath	.56
3 coats, metal lath and plaster	1.00
Keene cement on metal lath	1.25
Ceilings with ¾ hot roll channels metal lath	.67
Ceilings with ¾ hot roll channels metal lath plastered	1.40
Shingle partition ¾ channel lath 1 side	.62
Single partition ¾ channel lath 2 sides 2 inches thick	2.20
4-inch double partition ¾ channel lath 2 sides	1.30
4-inch double partition ¾ channel lath 2 sides plastered	2.45

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
2 coats Atlas cement, brick or concrete wall	1.25
3 coats cement finish No. 18 gauge wire mesh	1.75
3 coats Atlas finish No. 18 gauge wire mesh	2.05

Wood lath, $4.50 per 1000.

2.5-lb. metal lath (dipped)	.19
2.5-lb. metal lath (galvanized)	.22
3.4-lb. metal lath (dipped)	.24
3.4-lb. metal lath (galvanized)	.29

¾-inch hot roll channels, $45 per ton.
Hardwall plaster, $15.40 ton; $12.95 in paper sacks (rebate 15c sack).
Finish plaster, $16.40 ton; in paper sacks, $13.85 (rebate 10c sack).
Dealer's commission, $1.00 off above quotations.
Hydrate Lime, $19.50 ton.
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $43.00 per M.

Composition Stucco—$1.60 to 2.00 per sq. yard (applied).

Plumbing—

From $60.00 per fixture up, according to grade, quantity and runs.

Roofing—

"Standard" tar and gravel, $5.25 per square for 30 squares or over.
Less than 30 squares, $5.50 per sq.
Tile, $19.00 to $35.00 per square.
Redwood Shingles, $11.00 per square in place.
Cedar Shingles, $10.50 sq. in place.
Recoat, with Gravel, $3.00 per sq.

Sheet Metal—

Windows—Metal, $1.80 a sq. foot.
Fire doors (average), including hardware, $2.00 per sq. ft. (not

Skylights—

Copper, $1.35 sq. ft. (not glazed).
Galvanized iron, 28c sq. ft. (not glazed).

Stone—

Granite, average, $5.50 sq. foot in place.
Sandstone, average Blue, $3.50; Boise, $2.60 sq. ft. in place.
Indiana Limestone, $2.60 per sq. ft. in place.

Store Fronts—

Copper sash bars for store fronts, corner, center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Steel Structural—$85.00 per ton erected). This quotation is an average for comparatively small quantities
Light truss work higher; plain beam and column work in large quantities, less.
Cost of steel for average building (erected), $82.00 per ton.

1930 WAGE SCHEDULE FOR SAN FRANCISCO BUILDING TRADES

FIXED BY S. F. BUILDERS EXCHANGE

Craft	Journeymen Mechanics
Asbestos workers	$ 8.00
Bricklayers	11.00
Bricklayers' hodcarriers	7.00
Cabinet workers, (shop)	7.50
Cabinet workers, (outside)	9.00
Carpenters	9.00
Cement finishers	9.00
Electric workers	9.00
Electrical fixture hangers	8.00
Elevator constructors	10.00
Elevator helpers	7.00
Engineers, portable and hoisting	9.00
Glass workers	8.50
Hardwood floormen	9.00
Housemovers	8.00
Housesmiths, arch. iron, skilled all branches	9.00
Housesmiths, arch. iron, oot skilled all branches	8.00
Housesmiths, reinforced concrete, or rodmeo	9.00
Iron workers (bridge & structural) including engineers	11.00
Laborers, building (6-day week)	5.50
Lathers, channel iron	10.00
*Lathers, all other	8.50
Marble setters	10.00
Marble helpers	6.00
Marble cutters and copers	8.00
Marble bed rubbers	7.50
Marble polishers and finishers	7.00
Millmen, planing mill department	7.00
Millmen, sash and door	6.00
Millwrights	8.00
Model makers	10.00
Model casters	9.00
Mosaic and Terrazzo workers	9.00
Mosaic and Terrazzo helpers	6.00
Painters	9.00
Painters, varnishers and polishers (shop)	7.50
Painters, varnishers and polishers (outside)	9.00
Pile drivers and wharf builders	9.00
Pile drivers engineers	10.00
Plasterers	11.00
Plasterers' hodcarriers	7.50
Plumbers	10.00
Roofers, composition	8.00
Roofers, all others	8.00
Sheet metal workers	9.00
Sprinkler fitters	10.00
Steam fitters	10.00
Stair builders	9.00
Stone cutters, soft and granite	8.50
Stone setters, soft and granite	9.00
Stone carvers	8.50
Stone derrickmen	9.00
Tile setters	10.00
Tile helpers	6.00
Auto truck drivers, less than 2500 lbs	5.50
Auto truck drivers, 2500 to 4500 lbs	6.00
Auto truck drivers, 4500 to 6500 lbs	6.50
Auto truck drivers, 6500 lbs. and over	7.00
General teamsters, 1 horse	5.50
General teamsters, 2 horses	6.00
General teamsters, 4 horses	6.50
Plow teamsters, 4 horses	6.50
Scraper teamsters, 2 horses	6.00
Scraper teamsters, 4 horses	6.00

*On wood lath if piece rates are paid they shall be not less than such an amount as will guarantee, on an average day's production of 1600 lath, the day wage set forth.

Eight hours shall constitute a day's work for all Crafts except as otherwise noted.

Plasterer's hodcarriers, bricklayers' hodcarriers, roofers, laborers, and engineers, portable and hoisting, shall start 15 minutes before other workmen, both at morning and noon.

Five days, consisting of eight hours on Monday to Friday inclusive, commencing January 31, 1930, shall constitute a week's work.

Overtime shall be paid as follows: For the first four hours after the first eight hours, time and one-half. All time thereafter shall be paid double time. Saturday (except laborers), Sundays from 12 midnight Friday, and Holidays from 12 midnight of the preceding day shall be paid double time. On Saturday laborers, buildiog, shall be paid straight time.

Where two shifts are worked in any twenty-four hours shift time shall be straight time. Where three shifts are worked, eight hours pay shall be paid for seven hours on the secood and third shifts.

All work shall regularly be performed between the hours of 8 A. M. and 5 P. M., provided, that in emergencies or where premises cannot be vacated for work by mechanics until the close of business, men then reporting for work shall work at straight time; but any work performed after midnight shall be paid time and one-half except on Saturdays, Sundays, and holidays, when double time shall be paid.

Recognized holidays to be New Year's Day, Decoration Day. Fourth of July, Labor Day, Admission Day, Thanksgiving Day and Christmas Day.

Men ordered to report for work, for whom no employment is provided, shall be entitled to two hours pay.

ARCHITECTS' BUILDING

Fifth and Figueroa Streets, Los Angeles

DIRECTORY OF ARCHITECTS AND ALLIED INTERESTS

	Room
THE ARCHITECT AND ENGINEER (R. D. Bunn, Representative)	410
ADAMS, Charles G.	1016
BASHFORD, Katherine	710
BUILDING MATERIAL EXHIBIT	First & Mezz.
COATE, Roland E.	701
DeAHNA, Manfred	806
DODD & RICHARDS	606
EAGER, W. W.	505
HEAD, Chalfant	806
HUTCHASON, Arthur	1102
JOHNSON, Reginald D.	707
KELLEY, H. Roy	1102
KISTNER, Theodore C.	814
LOCKWOOD, Robert	512
L. A. ARCHITECTURAL CLUB	205
MARSH, Norman F.	516
MARSTON & MAYBURY	403
MITTRY, George	501
MOODY, Walter L.	312
MURRAY, Robert Dennis	502
NEWTON, H. C.	502
NOMLAND, Kemper	615
PARKER, Llewellyn A.	804
PHILLIPS, Ralph E.	603
POWELL, Herbert J.	516
RICHARD, William	607
SEDGLEY, Arlos R.	816
SIMPSON CONT. COMPANY	1007
SMITH, D. D.	516
SMITH, Glen Elwood	1210
STANTON, REED & HIBBARD	1107
STAUNTON, Wm. S. Jr.	806
WATSON, L. F.	903
WHARTON, Heth	802
WINSLOW, C. M.	1001
WITMER, David J.	903
WOOLLETT, Wm. Lee	802

"We have recently done a hall in Hartford which we painted in black, white and gray—the whole room —and we had gold lines and then we put in different colored lighting which changed as we wanted to change the effect of the room, and changed the intensities as we wanted to with dimmers and so forth. We can get practically any effect on earth in that room—that is any effect that is possible with light."

John Mead Howells, New York architect, with slides showed specific examples of the use he has made of light in architecture. He illustrated how he gave emphasis to the architectural detail on one of his buildings by proper placement, correct intensity, and color of floodlighting.

HOW CAN NEW CONSTRUCTION BE FINANCED?

Bulletin Illinois Society of Architects

The big problem confronting architects today is how to finance new construction.

Under conditions which have existed for some years, an architect in addition to being a designer and a business man must be a financier and for the majority of projects must be able to secure the funds necessary to finance new construction.

During the past decade this was not usually a difficult matter owing to the popularity of bond issues, but recently real estate bonds have fallen into disrepute and at present there is practically no market whatever for this class of securities. Many real estate bonds issued during the past ten years bearing 6 to 7 per cent interest can be purchased for in some cases as low as forty cents on the dollar. This is a most deplorable state of affairs and obviously shows unwise financing.

Of course every architect knows of instances where bonds have been issued and sold for an amount greatly in excess of the cost of the land and the improvements. Under these conditions any deficiency in the estimated gross return of the property could only result in default of interest as well as principal.

It is alleged that at present forty-four of the forty-eight well known real estate bond houses in Chicago have recently defaulted on either interest or principal on the issues put out by them. This state of affairs to a very large extent may be charged to the real estate bond houses direct. Many of these bond houses instead of being sound financial institutions with large resources were simply an aggregation of bond salesmen, or more properly speaking, the house itself instead of being a financial institution was simply a brokerage house. When real estate loans were made, instead of being based on real values and a conservative estimated return, were written on inflated values with the inevitable day of reckoning.

It is the editor's belief that the day of the real estate bond issues is passed and that some other means must be found to finance new construction. It is prob-

No. 4054

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CONCEALED DOOR CHECK

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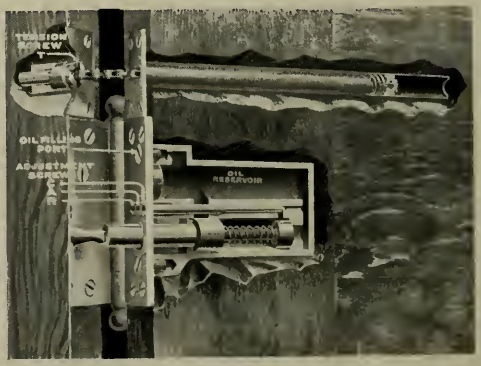


THE CONDOR CO.
58 Sutter Street
San Francisco, Calif.

able that the most popular way will be a development of the co-operative building plan or the development of building corporations where the money necessary to build will be secured by the issuing of preferred and common stock. Of course, legitimate projects can secure loans for approximately 50 per cent of the cost of the investment, but the additional funds must be supplied otherwise.

Speculative builders and investors of speculative ventures who danced must now pay the fiddler.

CONTRACTORS ON STATE BUILDINGS PRAISED FOR EFFICIENCY

By C. PIERSON

[Concluded from April Number]

Out of hundreds of contracts let by the Division of Architecture, only a fraction of 1 per cent of the contractors have failed to live up to the terms of their agreements in one way or another. This speaks exceedingly well of the contracting fraternity as a whole.

It has always been the policy of the Division to look into a contractor's financial condition and experience before awarding a contract to him. Up until August 14, 1929, it was necessary to delay awarding of contracts until the contractor's experience and financial condition could be checked up. This information was not always forthcoming or easily obtainable, and often 10 days or two weeks' time would elapse between the opening of bids and the awarding of contracts solely for lack of this information.

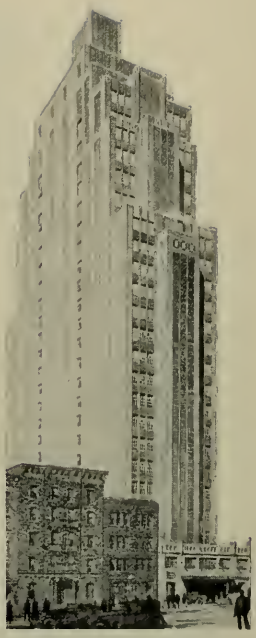
Under a law passed by the legislature of 1929 and approved by Gov. Young, the Department of Public Works is authorized to require contractors to prequalify before plans and specifications for duly advertised public work can be issued to them. This is known as the "Prequalification Law," Chapter 644, 1929. Under its terms, contractors who have previously filed answers to a questionnaire, satisfactory to the Department of Public Works, will receive plans and specifications upon request, but others who have not filed their answers, and who request plans, will be delayed in the receipt of same until they comply with the requirements of this law.

Accordingly, a questionnaire was prepared and forwarded to all contractors upon their request, and these are now being received, checked and filed. The questionnaire covers the experience and financial condition of the individual, copartnership or corporation, as the case might be, and must be sworn to and audited by a public accountant. By having this information on file at the time bids are received, awards can be made without delay.

The passage of this legislation will work to the advantage of the contractor as well as to the state, in that the contractor will know that he is competing only against prequalified substantial contractors.

To date the response to the questionnaire has been very gratifying, and the forms are being rapidly returned.

Where They Park Cars in the Clouds



Architects: JARDINE, HILL & MURDOCK. *Gen. Contractors:* FRED T. LEY CO. *Electrical Contractors:* VAN WAGONER-LINN CONSTRUCTION CO.

The Kent Automatic skyscraper garage on east 43d Street in New York is literally built up 24 stories around 3 elevator shafts. The patron drives in at street level, locks and leaves his car. An electro automatic parker lifts the rear wheels and rolls the car onto an elevator, which carries it to an upper floor. There the parker rolls the car into a parking space, lowers the rear wheels to the floor and leaves it. Nobody gets into the car; the car is not touched; there is no chance of damaging it by collision; the handling is quick, clean and safe; the patronage is steady and profitable.

The electrical installation of this skyscraper garage is intricate and interesting. Naturally the engineers insisted upon dependable wires and cables for all power, lighting and control circuits — HAZARD Insulated Wires and Cables were used throughout.

Hazard Insulated Wire Works

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Atlanta Birmingham San Francisco Los Angeles Seattle Dallas

Ric-wiL Pipe Supports are made of heavy rugged castings, rust-proofed. Rollers always move freely.

Pipe Supports Are Independent

THE pipe supports in Ric-wiL Conduit for underground steam pipes cannot be knocked over or broken down, and they carry the pipes without an ounce of weight on the tile conduit.

They are founded on the strong base drain below, their saddles wedged between two sections, coming up into the conduit through special holes which are cemented shut when the supports are in. This means that none of the pipe movement due to expansion, vibrating or pounding touches the conduit—a powerful safe construction.

This is one more of the reasons why you should specify Ric-wiL.

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UNDERGROUND CONDUIT

Detail of Entrance, Rossman Warehouse, San Francisco
FRED'K. H. MEYER, *Architect*

Rossman "Champleve" Tile is used for the exterior, while the vestibule is of Rossman Imported Spanish and "Nubian" Tile.

Rossman Corporation of California

E. L. BRADLEY, *Manager*

49 Geary Street, *San Francisco* — Architects Building, *Los Angeles*

Under the terms of the Contractor's License Act, another bill that received legislative and executive approval, a contractor is defined as one who furnishes and installs labor and material for another, the cost of which exceeds the sum of $200. Therefore, the Division of Architecture must obtain information on many kinds of contractors. Practically all of the work handled by the Division is by contract, and separate contracts for most every kind of building construction are entered into in the course of a year. General contracts, or contracts for a whole structure, of course, predominate, but minor contracts for such items as sidewalks, linoleum, window shades, water wells and what-not, all come in due course, and contractors for all such miscellaneous items must also be both prequalified and licensed.

The licensing of contractors is not a function of the Department of Public Works, but comes under the Department of Professional and Vocational Standards.

SCHOLARSHIPS FOR ART STUDENTS

A limited number of scholarships, available to American men and women, providing for study in the Institute of Art and Archaeology of the University of Paris during a six weeks' summer session, beginning June 30th, are offered by the Carnegie Endowment for International Peace. Each scholarship carries a stipend of $400, which will cover traveling, living and tuition expenses.

The full program of work comprises:

(1) The art of the Orient, (2) The Orient and the art of mediaeval Europe, (3) The principles of modern art, (4) The art and technique of Romanticism.

The courses are designed primarily to meet the needs of the following persons who have already made a study of the history and criticism of Art.

(a) University and college students who specialize in Art with a view to becoming teachers of Art, curators of museums, architects, art workers and writers.

(b) Teachers of Art and curators of museums desirous of taking advanced instruction, acquiring new points of view and studying directly the art treasures of Paris and France.

(c) Students or teachers of French or of history, particularly interested in Art.

Students for admission must submit credentials showing their qualifications to pursue the course to advantage.

The instruction in each course consists of thirty lectures (in French) or practical exercises, supplemented by assigned reading and visits to monuments studied. At the close of the Summer Session, students are required to take an examination in each of the courses they have followed.

The diploma "Brevet d'Histoire de l'Art de la Sorbonne" is conferred by the Institute of Art and Archaeology of the University of Paris in recognition of a successful examination following a full course of study at the Summer Session.

THE GOLDEN GATE BRIDGE

Editorial in *Engineering News-Record*

Completion of test borings and other preliminaries for the proposed Golden Gate bridge has at last made available the data required for locating the piers and definitely estimating the cost of a structure having the unprecedented span of 4,200 feet. Opposition from taxpayers who objected to the financing plan has been fought through the courts and finally decided by the federal Supreme Court in favor of proponents of the bridge. There remains the major problem of raising the money with which to build the bridge.

Voters of the Bridge and Highway District—which includes six counties but places 85 per cent of the assessment in San Francisco—are to be asked, probably late next summer, to approve a bond issue of $30,000,000 for construction costs. Toll revenue from automobile traffic is expected to pay operating costs and refund the first cost. Engineers are interested quite as much in the financing program as in the technical phases of the project, and since their opinions have influence on popular voting in matters of this kind, it would be good strategy on the part of proponents of the Golden Gate bridge to find means of making sure that the project is presented in the right light to the local engineers. Two years ago an adverse attitude existed among San Francisco engineers, and such an attitude would not be helpful in a major bond issue campaign that requires a two-third vote.

In its technical aspects the project is distinguished by proposing the first long-span bridge in proximity to an active earthquake rift. Its location is roughly parallel to and about six miles from the San Andreas fault, whose movement caused the destructive San Francisco earthquake of 1906. Such a condition obviously raises intensely interesting questions as to tower stiffening and as to the effect of a major shake on towers, cables and suspended structures. As to costs, men of excellent repute in the bridge-building field say that a suspension bridge can be built as planned within the over-all cost estimate of $30,000,000, a surprisingly low figure. Larger sums are spent on many public projects with less argument and litigation than have attended this one. Hence detail questions of cost are less important now than diplomacy and the cultivation of the right public attitude toward the project.

BUILDER'S EXCHANGE DIRECTORS

At the annual election of the San Francisco Builders' Exchange the following members were elected to the Board of Directors: R. J. H. Forbes, W. H. George, Emil Hogberg, E. M. Hundley, Jos. B. Keenan, J. D. McGilvray, Alexander Mennie, John E. Mullen, H. N. Patterson, A. H. Wilhelm and George A. Wieland.

IRON AND STEEL PRODUCTS

Announcing a Merger

UNITED STATES METAL PRODUCTS COMPANY and SOULÉ STEEL COMPANY have merged their complementary services into one organization, and will hereafter operate as SOULÉ STEEL COMPANY. Both companies will continue with the same personnel as before, but will collaborate as a unit to provide a larger measure of prompt and efficient service.

SOULÉ STEEL COMPANY

UNITED STATES METAL PRODUCTS DIVISION
OF SOULÉ STEEL COMPANY

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Specify DICKEY CLAY PRODUCTS

The name "DICKEY" is everywhere recognized as a guide to Clay Products of uniformly high quality.

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THE STANDARD HOLLOW BUILDING TILE

Partition Tile	Face Brick
Drain Tile	Fire Brick
Veneering Tile	Paving Brick
Furring Tile	Step & Walk Brick
Fireproofing Tile	Wall Coping
Floor Tile	Flue Lining

DICKEY Flashing Blocks

W. S. DICKEY CLAY MFG. COMPANY
SAN FRANCISCO

GOOD TASTE
+ STRENGTH
SOSS
INVISIBLE HINGES
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A. I. A. CONVENTION

Miscellaneous Information of Interest to Delegates

In connection with the A. I. A. Convention in Washington this month, the President and the Secretary of the Institute, in collaboration with the Chairman of the Convention Committee, Alexander B. Trowbridge, and the President of the Washington, D. C., Chapter, Horace W. Peaslee, are now perfecting the details of the program, which will be available in printed form at the time of registration.

Election of Delegates

With regard to the number of delegates to which each Chapter is entitled, to the taxes and refunds, and to reduced railroad fares, it may be stated that the Secretary has sent complete information thereon to the President, to the Secretary, and to the Treasurer of each of the sixty-five Chapters of the Institute. Chapter Secretaries are requested to send the names of the elected delegates of the Chapter to *The Octagon* as soon as convenient, as that will greatly expedite the work of the Registration Committee. It should be borne in mind that each delegate should bring his Institute membership card, for presentation at the time of registration.

Hotel Reservations

The Mayflower Hotel, DeSales Street and Connecticut Avenue Northwest, has been selected as hotel headquarters for all attending the convention. The hotel can be reached conveniently from the Union Station by taxicab, or by taking a street car marked "Mount Pleasant" or "Alta Vista."

By special arrangement with the management of the Mayflower Hotel all Institute delegates, members, and guests, will be assured accommodations if their reservations are made direct to the Mayflower Hotel not later than May 15. Reservations requested after May 15 may not be available.

The Mayflower Hotel has agreed to assure accommodations for all of those attending the convention on the following conditions:

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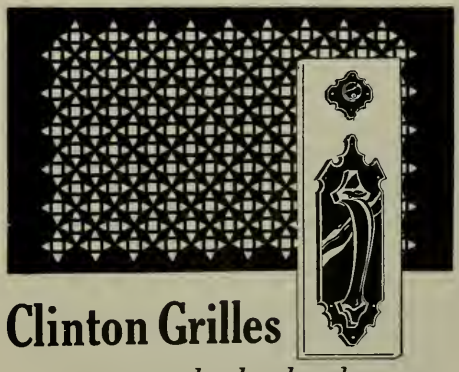

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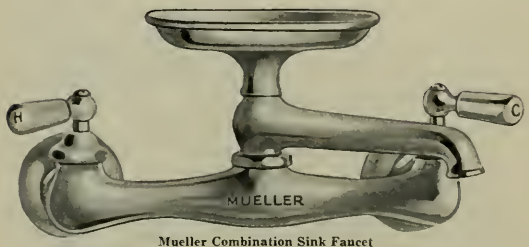

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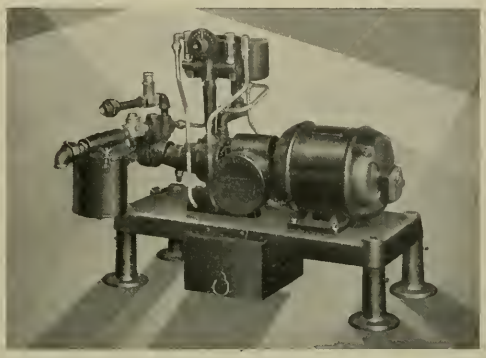

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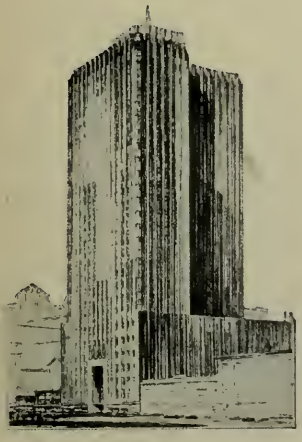

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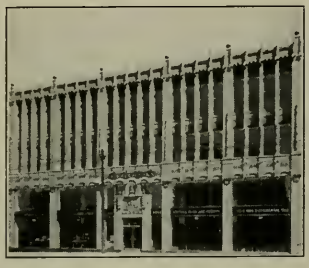

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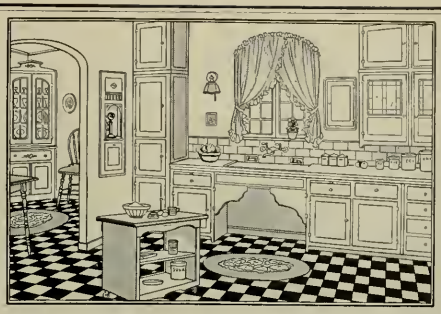

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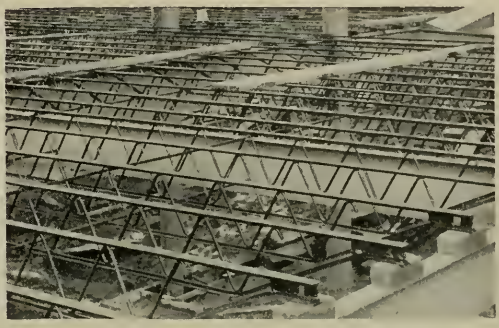

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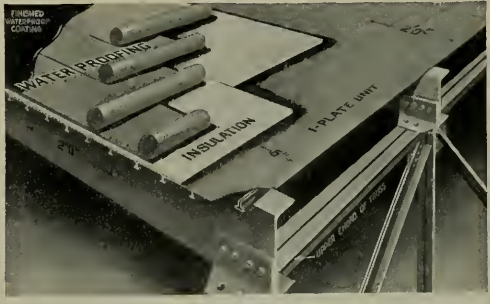

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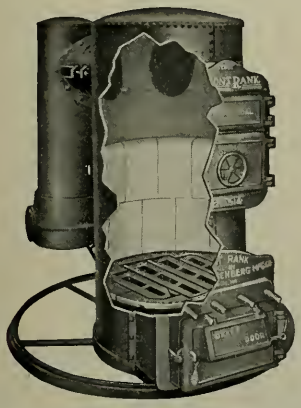

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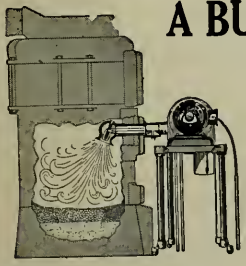

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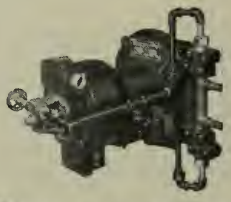

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PHOTOGRAPHIC EXHIBITION

An exhibition of European photographs taken last summer on the tour of the School of Architecture of the University of Southern California, are on display in the Architect's Building Material Exhibit, Los Angeles.

The tour was organized for the purpose of giving the student of architecture the opportunity of a first hand glimpse of the entire history of architecture, and it covered a route abounding with famous monuments. Photographs of the more interesting places were taken by Lester S. Ford, one of the students, and include scenes in France, Italy and England. The pictures taken in France consist of cathedral interiors and exteriors, Gardens of Versailles, buildings at Fontainebleau, and scenes in Paris and Avignon. The Italian group includes scenes in Pisa, Rome, Tivoli, Pompeii, Florence, Certosa and Venice. The English pictures were taken in and around Cambridge, London and the Shakespeare country.

ENGINEER APPLICATION BLANKS

Approximately 3000 application forms, along with complete information designed to guide applicants in the correct procedure for becoming registered and licensed as civil engineers, have been mailed out by the California Board of Registration for Civil Engineers. Additional forms are being sent out as names are received, it is stated by James F. Collins, director of the State Department of Professional and Vocational Standards, in his report to the Governor's Council.

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Who's Who in this Issue

RALPH C. FLEWELLING, whose residence work is illustrated in this number, was born in St. Louis, Michigan, May 4, 1894. He graduated from Wesleyan University, Middletown, with the degree of Bachelor of Science. Mr. Flewelling studied architecture at Massachusetts Institute of Technology during 1916-1917. In 1917 he was commissioned second lieutenant, U. S. Army, and assigned to the 19th Infantry. In May, 1918, he was commissioned Captain. He remained in service until September, 1919. After one year spent in Boston, Mr. Flewelling located in Los Angeles and worked in the offices of H. M. Patterson, Kenneth MacDonald, Jr., Wm. Lee Wollett and A. M. Edelman. He began to practice for himself in May, 1925, in Beverly Hills. Examples of his recent work, besides the Joseph G. Donaldson and B. S. Kutler residences, include the residence of James C. Crawford in Burbank, California; the residences of Mr. and Mrs. N. Y. Stockwell, Los Angeles, and Mr. and Mrs. G. L. Colburn, Los Angeles; the residences of Joseph P. Connolly and Col. Moseley in Beverly Hills, also the Nash-Nicholls automobile show room, Long Beach, California; the Hawthorne Grammar School, Beverly Hills, and the Mudd Memorial Hall of Philosophy, University of Southern California.

WILLIAM EDWARD SCHIRMER, artist turned architect, a fortunate combination for architecture when the practical and mechanical balance to bring an architect so large a portion of industrial and commercial work. His residential work, shown in this issue, bears witness to a versatile and unprejudiced outlook with scope for his artist's training. His apartment work measures to this standard. The San Francisco fire terminated Mr. Schirmer's senior high school year. After several years study in the California School of Fine Arts, he began architectural training under Maxwell G. Bugbee, a gifted designer and mathematician. As with many another, his later experience in the office of Willis Polk was very important training. He began the practice of architecture with Arthur S. Bugbee with offices in San Francisco and Oakland. In 1927 the partnership was terminated and he continued practice in Oakland, California.

SIDNEY B. and **NOBLE NEWSOM,** brothers, come of a long line of architects. Their father, Samuel Newsom, practiced in San Francisco, 1870 to 1907. Sidney joined his father about 1893 when much important work was being planned, later including several of the buildings of the 1904 Mid-Winter and St. Louis Fairs. Noble entered the office following the fire of 1906, later taking architecture at the University of California. The brothers continued their father's practice, moving to Oakland in 1928. Archie T. Newsom, distantly related, practiced several years in San Francisco, and joined the firm in 1925. He is a graduate of Armour Institute of Technology with experience in several Chicago architects' offices and Bliss and Faville's in San Francisco. Their success in fine residence work is natural — heightened by Sidney's training with Parrish and Schroder, New York, and a varied and valuable experience in other eastern offices; Noble's training in architecture, and Archie's in interior decoration, including furniture, with Mrs. Edgar De Wolfe. As officers in the Engineers Corps during the World War they went early and stayed late, consequently with opportunity for valuable service and experience in their chosen fields—Sidney going into the most active front line communication service in the very portion of Europe which interested him most in his round-the-world trip in late 1911 and early 1912.

EDWIN LEWIS SNYDER, who has contributed some of his residential work to this issue, is a Californian by birth. His architectural training began at the University of California under John Galen Howard. Following graduation a fifth year course was devoted to post-graduate design; and then two years at the Atelier Chiflot at Beaux Arts. During his stay in Paris, Mr. Snyder spent as much time as his studies allowed in traveling through the greater portion of western Europe. Upon his return, he spent some time in the office of Albro and Lindeberg in New York and then came west to the office of Charles Peter Weeks in San Francisco. After serving a year in the United States Army Air Service as a pilot during the World War, Mr. Snyder returned to the firm of Weeks and Day to manage branch offices in Sacramento and Los Angeles. In 1925 he came to Berkeley to practice his profession, where he is now in architectural work.

GORDON B. KAUFMANN, architect of the Henderson house illustrated in this issue, was born in London in 1888. Mr. Kaufmann attended South Kensington School of Art and articled to A. W. S. Cross, architect. He journeyed to Canada in 1910 and to California in 1914, locating in the southern part of the state where he has built up a successful practice in architecture. For several years Mr. Kaufmann was associated with Reginald D. Johnson and Roland E. Coate. Since 1924 he has practiced under his own name.

JOHN BYERS, one of whose ranch houses appears in this number, first became known in California for his revival of adobe construction. Specializing in that type of work, he surrounded himself with a crew of native Mexicans, who engaged in the crude manufacture of adobe bricks, clay floor tiles and handmade roof tiles necessary as an adjunct to that style of building. Disposing of this business, he became interested in architecture as a profession and studied under private instructors and in the engineering schools for a certificate to practice architecture in the State of California. This was granted some years back. His previous training had not been along architectural lines. He studied and graduated in engineering at the University of Michigan, and later took a second degree in General Science at Harvard University. Following college, he traveled in France and South America. With offices in Santa Monica, most of his work is in that vicinity, although his early California ranch houses are scattered throughout the country. His most notable buildings, outside of purely residential work, are perhaps the Brentwood Country Club and the Miles Memorial, both in Santa Monica.

CONVENTIONS AND EXHIBITIONS

June 19-30 — Pan-American Congress of Architects, Rio de Janeiro, Brazil.

September — International Architects' Congress, Budapest, Hungary.

October 10-11—Third annual meeting State Association of California Architects, Del Monte and Monterey, California.

November 18-29 — Art Exhibition, Royal Institute of British Architects, London.

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JUNE
1930

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Contents

COVER DESIGN—House near Orinda, California
John Ekin Dinwiddie
FRONTISPIECE—Residence of Kirk B. Johnson, Santa Barbara
George Washington Smith, Architect

TEXT

The Drama of Domestic Architecture 35
Julian C. Mesic
My Ideal of a Garden 64
Walter P. Eaton
The American Dwelling House 83
Lewis Mumford
Bath Rooms Advance to Meet Modern Needs 97
The Architect's Viewpoint 98
Carleton M. Winslow, A. I. A.
Steel House Construction 103
Lee H. Miller
Late Inventions in the Construction Field 107
With the Architects 109
Society and Club Meetings 113

PLATES AND ILLUSTRATIONS

Residence of Mrs. Margaret S. Fillmore, Los Angeles 36-37
Roy Seldon Price, Architect
House for Curtis Cate, Carpenteria 38-39
Reginald D. Johnson, Architect
Residence of Thomas Telfer, Berkeley ..... 40 to 45
William Edword Schirmer, Architect
Residence of J. W. O'Neill, Piedmont 46-47
Residence for Walter Eliassen, Oakland 48
William Edward Schirmer, Architect
Residence of Harry Gibson, Oakland 50-5
William Edward Schirmer, Architect
Ranch House for Major L. H. French 52-53
John Byers, Architect
Residence of Fritz T. Henshaw, Piedmont 54-55
Sidney B. and Noble and Archie T. Newsom, Architects
Semi-Detached Residence Apartments 56
Edwin L. Snyder, Architect
Residence for F. B. Travers, Claremont Pines 57
Edwin L. Snyder, Architect
Residence of Dr. H. H. Hitchcock, Berkeley 58-59
Edwin L. Snyder, Architect
Residence of H. C. Reid, Berkeley 60-61
Edwin L. Snyder, Architect
Residence of Milton Clarke, San Francisco 63-64
Masten and Hurd, Architects
Residence of Fred S. McCord, San Francisco 65-66
Masten and Hurd, Architects
Residence of Benjamin Kutler, Beverly Hills ..... 67 to 79
Ralph C. Flewelling, Architect
Residence of Joseph Donaldson, Brentwood Park 80-81
Ralph C. Flewelling, Architect
Residence of Robert B. Henderson, Hillsborough 82, 84, 87, 88
Gordon B. Kaufmann, Architect

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HIS LAST WORK

One of the last and most successful houses designed by the late George Washington Smith of Santa Barbara, is the Kirk B. Johnson home, a detail of which is shown on the next page. Mr. Smith received an Honor Award from the American Institute of Architects, for the excellent design of this house only a few days prior to his death.

Photo by Dapprich

RESIDENCE OF KIRK B. JOHNSON, SANTA BARBARA, CALIFORNIA

GEORGE WASHINGTON SMITH, ARCHITECT

The ARCHITECT AND ENGINEER

VOLUME CI JUNE, 1930 NUMBER THREE

THE DRAMA OF DOMESTIC ARCHITECTURE

By Julian C. Mesic

THE world's *our* stage and all therein are actors—men, women, children; even things, ideas, dreams, hopes and fears. Courage we ask, to better our stage.

The foreground, here illustrated, is selected from a fine array of recent homes—delightful in their details—created, apparently, with the utmost ease—a limpid brush, an unlimited palate, a few strokes and behold the world of our dreams. Homes to match the drama of man's power.

The background is a process of evolution and influences. It has much of interest to us, is more vital than the flower. "The parent," says the philosopher, "is of more moment than the child. It *can* recreate." Our background spreads from the beginning of being, colorful beyond the power of the casual eye to behold, inter and overwoven; in form, sublime and otherwise.

The action is here and now, related to background and future by unbreakable ties. Shelter is second to the greatest of human concerns—food—with some thought for the poetry of life. That its appearance does not always please us is part of the duality of life, part our points of view, but finally the measure of man's ability.

Wisdom dictates analysis of our surroundings, that we may transcend adversities calmly. Philosophers seldom reason with the technicalities of architectural practice. Ruskin and Russell also stay in safer fields. Material progress is the chief characteristic of the Occidental. Some are interested in an idealism.

Lamenters of the "good old days" we have always. They might profitably investigate Oriental histories and judge if they really would enjoy changelessness. Japan has grappled with her idyllic beauties in life—in time, apparently, but what of China, driven to starvation! What of our own heedlessness of resources, and the increased difficulties of living?

Home is a necessity to each. To safeguard it by every force of government, community, family and individual power is a primal duty. The "writing" architect may be a pest, especially to himself, harassed by other duties, but who better has the facts and faculties to reason with solutions of building problems? *Life* prepares the mature practitioner for public leadership *if* he will but accept.

It is not enough to know forms, historical and modern. The thinker has faced the problem of environment in the develop-

ment of youth, in law enforcement, in the mental life of individual and community, and sorely needs every help. The philanthropist and social agency defines and struggles with problems always reflected in some building or buildings.

Ugliness, crowding, and unsatisfactory conditions are appalling in their reac-

there is yet time is so much wiser. Doctor and lawyer smooth out troubles, but how much wiser to prevent them!

* * *

Edwin Lewis Snyder believes that every architect cherishes a hope to one day build a town from the beginning, and have everything right. His plans for a subdivision

Photo by Miles Berne

RESIDENCE OF MRS. MARGARET S. FILLMORE, LOS ANGELES

Roy Seldon Price, Architect

tions. True, work has been done, but the blight is still incalculable. Contributory causes occur in our social structure; law and building methods, which can only be weeded out by patient effort. Of course our individual citizen *can* rise above untoward conditions, but what are the chances? Can we afford to be enamoured, to the exclusion of all else by the lovely array on the highlands?

Culture comes by constant modeling and refining of the life of a nation. It cannot be built on unrest or unwholesomeness in any part. A French revolution or less will surely upset it. To model the forms while

in the East Bay with groups of community homes with "central heating," swimming pool, clubhouse and gardens greatly appeals to us, in idea and design. Two-story six and seven-room homes with community service, utilizing the advantages of co-operation is decidedly new in so detached forms. That others will finance it is proof of a tremendous change in our social structure.

We—*all* the world, are party to the action of our drama. Each junior's interest, as well as humanity's, is served when he is loyal to a leader in the vanguard. Interests are interwoven. Worth will bring his turn at leadership. Careful building in homely

duties, are unfailing stepping-stones to honor, again with its obligations.

Full service requires a knowledge of the fundamentals of so many things—psychology, social science, equity, economics, engineering, society, and all the arts with architecture; zoning, utilities, transportation problem, schools, institutions. Creative talent grows with use; how high, use only tells.

Usages have become complicated, whole systems are built upon each detail, with often a supporting literature, and carried on by specialists requiring co-operation for completeness. Statisticians even tabulate the profit and loss of not conforming to adjoining building values and sometimes types. Neighborhood values have a tendency to equalize. In building, the architect is the coordinator.

The appraiser estimates architectural service in terms of efficiency and results. In layouts savings frequently exceed the service fee, leaving esthetic values as "velvet"—the world's greatest "something for nothing!" If all things *are equal,* a properly designed building costs less to build and operate than an improperly designed one, naturally. Better returns and satisfaction measure the value.

The merits of creative work are judged from various viewpoints, at times causing spicy debates, confusing, yet intriguing even to the uninitiated. However, there is always danger that others than the layman become confused or take an irrelevant remark on a minor detail as condemnation of the whole. The "razz" has no more place in public than a family row.

The "latest" and "the new idea" frequently appear as cunning little imps causing more unrest to home owners than any other actors in the building or social worlds. They appear in many aspects. The surest eradicators are good work and fundamentally right action regardless of fads.

House Overlooks Los Angeles, Beverly Hills and Pacific Ocean

RESIDENCE OF MRS. MARGARET S. FILLMORE, LOS ANGELES

Roy Seldon Price, Architect

On the other hand, the *general* style movement is fundamental. Humanity moves in cycles, and as a rule we should take the lessons of our times. Our co-operation is essential to our sanity. Exacting as our conventions may seem, there is still all the liberty we need. Applied to houses we soon find many of our youthful fancies superfluities. Close self analysis banishes much of the desire for novelties. Equipment, especially, will bear inspection, with its emotional appeals. Perspective will do wonders in any undertaking.

Submerged in this magazine we feel the world is populated by architects, but divide the old census figures—ten thousand architects to over one hundred twenty million people, equals one to over twelve thousand —one architect to three thousand families. In terms of homes, a lifetime of work—besides offices, factories development projects, and bridges. What opportunities! Who has them?

The "National Bureau of Economic Research" says, that less than 70 per cent of the nation's householders can rent or own new homes at present construction prices. What is new, less than ten years? Since when did we figure the life of even frame construction as less than twenty or twenty-five years? What is to become of it if we do grow *so* "new" minded? What of the drain on resources if we are not *compelled* to extract the older "values" from our buildings? What of the upkeep experts? Do we discard them? Hardly!

1930 Honor Award, A.I.A.

HOUSE FOR CURTIS CATE, CARPENTERIA, CALIFORNIA
Reginald D. Johnson, Architect

We wish this were the complete answer, but reason tells us that the $336 statisticians allot for worker's rent will not purchase much even in older buildings. Is there any wonder that struggle occurs and labor berates capital with its interest charges? Such ideas bombard our peace. Mansion

The harassed should take hope. Modern designers are deliberately seeking elimination and simplification as their keynotes. The very wealth of the times makes selection necessary to save us *all* from the *swamp*. In architecture, it began long before the World War by questioning both

1930 Honor Award, A.I.A.

HOUSE FOR CURTIS CATE, CARPENTERIA, CALIFORNIA
Reginald D. Johnson, Architect

or tenement, it is important to someone, and worthy a lot of thought by those who have any power of solution.

We remember that the rush of the day seems essential but maddening to many. Their efforts for satisfaction are vital to themselves only, but we must take it all with the days work and resolve it into its proper place. Better things come only through experience and trial with a real knowledge of the worthwhile things of life.

construction and design. Construction is being unified with modern usages and experience. Cornices, extravagant casings and wild forms have been curtailed, homes are more usable, with the result that a new frankness is recognizable and a new classicism is making itself felt in many fields.

In homes, special furnishings against simple walls continue to grow in favor. We wish to see the interiors in the Max C. Chotiner home designed by L. G. Scherer,

RESIDENCE OF THOMAS TELFER, CLAREMONT, BERKELEY
WILLIAM EDWARD SCHIRMER, ARCHITECT

Photo by Waters and Hanlin

RESIDENCE OF THOMAS TELFER, CLAREMONT, BERKELEY
WILLIAM EDWARD SCHIRMER, ARCHITECT

Photo by Waters and Hanlin

Professor H. W. Shepherd, Landscape Architect

GARDEN, RESIDENCE OF THOMAS TELFER, CLAREMONT, BERKELEY

WILLIAM EDWARD SCHIRMER, ARCHITECT

RESIDENCE OF THOMAS TELFER, CLAREMONT, BERKELEY
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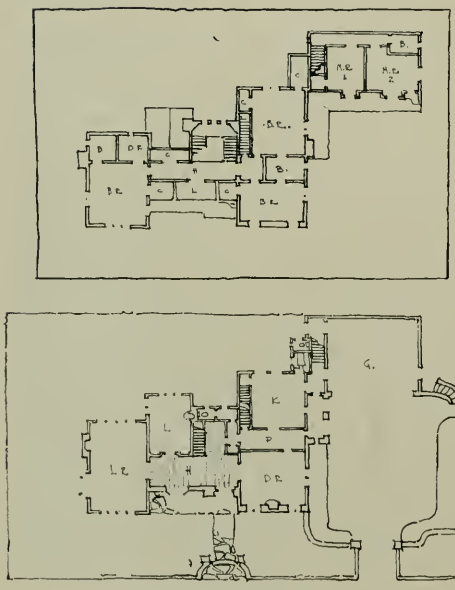

PLANS, RESIDENCE THOMAS TELFER
William Edward Schirmer, Architect

architect, Los Angeles. There is particular interest in the straightforward designing of the exterior, dominated by a happy disposition of necessities in a "modern" mood.

Twenty years ago this method was being tried by a few, using Mediterranean influences. Personally we believe it indicates a method of union of past and present which will produce tomorrow, with finer considerations of mass, form, texture, the use of color for its own sake and to enhance form, instead of destroy it.

In plan we expect more homes will incorporate studios, at least a special place for each member's hobby, be it photography, radio, mechanics, electricity, carving, printing or other practical avocation. Basements and attics are yielding their rights to be dull, and even the main rooms are accepting "collections" as livable.

People, in general, are interested in more activities since the movement of many home occupations to factories brought interest in

RESIDENCE OF THOMAS TELFER, BERKELEY
William Edward Schirmer, Architect

adult education in schools and clubs. To a degree, special needs are housed by special furniture, a wise course when "built-ins" would be useless to the next occupant. Changes occur even in the best regulated families.

We have a right to expect fine work from the architects whose work is represented here, and do expect it, as from many others. The doorways intrigue us and lend respect for their owner's dignity and personality. Each varies with the home type and needs. Our frontispiece from an Honor Award house of 1930, we feel, stands as a symbol also of the distinction and beauty of thought of its departed architect, George Washington Smith.

In the Henderson house at Woodside, California, by Gordon Kaufmann, the restraint, the simple dignity, the discriminating use of brick textures varied by tile-like sizes with wide joints, pleases us beyond words. What could be more refreshing,

HOUSE OF WALTER ELIASSEN, OAKLAND
William E. Schirmer, Architect

Photo by Waters and Hanlin

RESIDENCE OF J. W. O'NEIL, PIEDMONT, CALIFORNIA

WILLIAM EDWARD SCHIRMER, ARCHITECT

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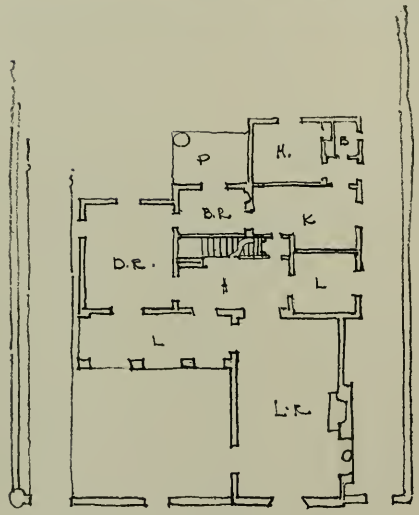
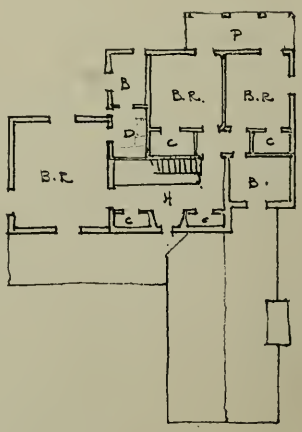
RESIDENCE OF J. W. O'NEIL, PIEDMONT, CALIFORNIA

WILLIAM EDWARD SCHIRMER, ARCHITECT

RESIDENCE FOR WALTER ELIASSEN, OAKLAND, CALIFORNIA
William Edward Schirmer, Architect





· FIRST FLOOR PLAN · · SECOND FLOOR PLAN ·

PLANS, RESIDENCE FOR WALTER ELIASSEN, OAKLAND, CALIFORNIA
William Edward Schirmer, Architect

coupled with a convincing mass and a deft placing of doors, windows, arcades and other details?

In the Milton Clark home, San Francisco, by Masten and Hurd, we feel the influence of setting in the growing forms—lithe, sure and yet so intriguing about its doorway. The charm of many centuries challenges the imagination here, yet no burdening occurs. The Fred S. McCord home gracefully takes advantage of a larger setting, so simply yet with such ease that one wishes to see more work by these architects.

The house for Mr. and Mrs. Curtis Cate, Carpenteria, California, by Reginald D. Johnson, is likewise fortunate in a mature setting. Its merits are its own. It blends with the landscape and is vigorous in form to fit it for its use. If only words could express the meaning of and value of subtly related and placed forms! The charm of a slight difference in ridge heights and a careful placing and detailing of openings! One hopes for general appreciation and understanding of *why* it won an Honor Award in the Southern California Chapter, A. I. A. Exhibition of 1930, that we may have more good small houses.

The Benjamin S. Kutler residence, Beverly Hills, by Ralph C. Flewelling, represents the Mudejar type of Castilian architecture with unusual charm and satisfaction. Each succeeding view sustains the interest of our introduction. Such unity denotes unfailing care and effort by its designer.

* * *

The house for Fritz Henshaw, Piedmont, by Sidney B., Noble, and Archie T. Newsom, shows a well executed, picturesque Spanish type enhancing the opportunities of a hillside plot. The opportunity of placing openings just where the vista is best, and on two and even three sides of a room makes a strong appeal. The advantages of setting have been thoroughly developed in house and garden.

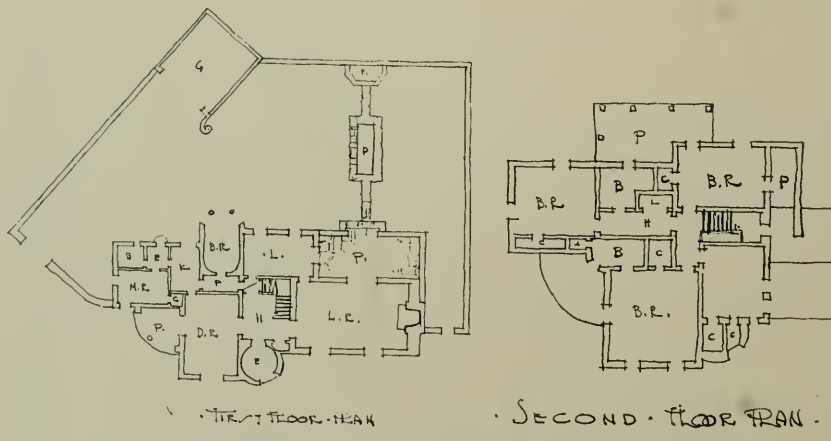
The two completed residences by Edwin Lewis Snyder illustrate designs adapted to local conditions. In Dr. Hitchcock's house Mr. Snyder has brought out the simpler type of Spanish work—securing effects with large, plain wall surfaces, a simple placing of openings and an entire lack of ornamentation. Color, playing an important part in the ultimate effect, is obtained by the use of tile and brick for floors, plain whitewashed walls, colorful hangings and floor coverings, and a pleasing garden design which changes with the seasons but is always brilliant with color. In designing the H. C. Reid house, which follows the English country type with modifications necessary to our locality and mode of living, an entire reversal of thought was necessary. The exterior composition while simple in form depends not on plain wall surfaces but on the introduction of characteristic bits of half-timber work and wood corbelling. On the interior canvassed walls and wood panelling take the place of the white plaster treatment of the Hitchcock home. The two houses, entirely different in plan and in execution of design, indicate the diversity of architectural treatment with which architects of today must be familiar.

We were particularly fortunate in finding William Edward Schirmer with a photographer. What a group of fine homes were examined through Berkeley, Piedmont and Oakland! Monterey was foregone except as exemplified in models. A strong happy mood characterizes Mr. Schirmer's work and when it turns to English and French forms we are charmed.

Clients are an ever present topic. How to coordinate their wants with the ideal and practical is a delicate problem with most architects. We have seen clients bitterly regret they did not take their architect's advice. In a new setting, visions open and when too late they mourn, sometimes condemningly, that they were not *made,* even *forced* to acquiesce in a solution, new to their preconceived ideas.

We felt Mr. Schirmer capable of wisely coping with any problem. However, he hastens to caution, "It is *so* unfortunate for an architect to have to fight. It puts him so out of mood for his real work." At the end he remarked, "I would rather stake my whole presentation on the Thomas Telfer residence and a Los Gatos home"—then, realizing the connection, exclaimed, "And

RESIDENCE OF HARRY GIBSON, OAKLAND, CALIFORNIA
William Edward Schirmer, Architect



PLANS, RESIDENCE OF HARRY GIBSON, OAKLAND, CALIFORNIA
William Edward Schirmer, Architect

RESIDENCE OF HARRY GIBSON, OAKLAND, CALIFORNIA
WILLIAM EDWARD SCHIRMER, ARCHITECT

Photo by Miles Berne

RANCH HOUSE FOR MAJOR L. H. FRENCH, LAS TURAS LAKE

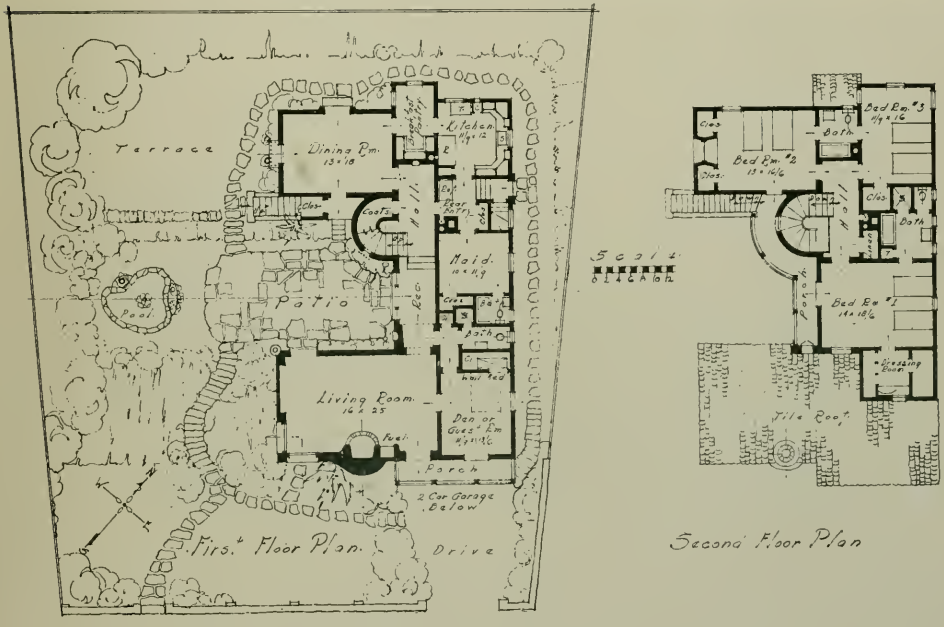
JOHN BYERS, ARCHITECT

RANCH HOUSE FOR MAJOR L. H. FRENCH, LAS TURAS LAKE
John Byers, Architect

PLANS, RANCH HOUSE FOR MAJOR L. H. FRENCH, LAS TURAS LAKE
John Byers, Architect

PATIO, RESIDENCE OF FRITZ T. HENSHAW, PIEDMONT, CALIFORNIA
SIDNEY B. AND NOBLE AND ARCHIE T. NEWSOM, ARCHITECTS

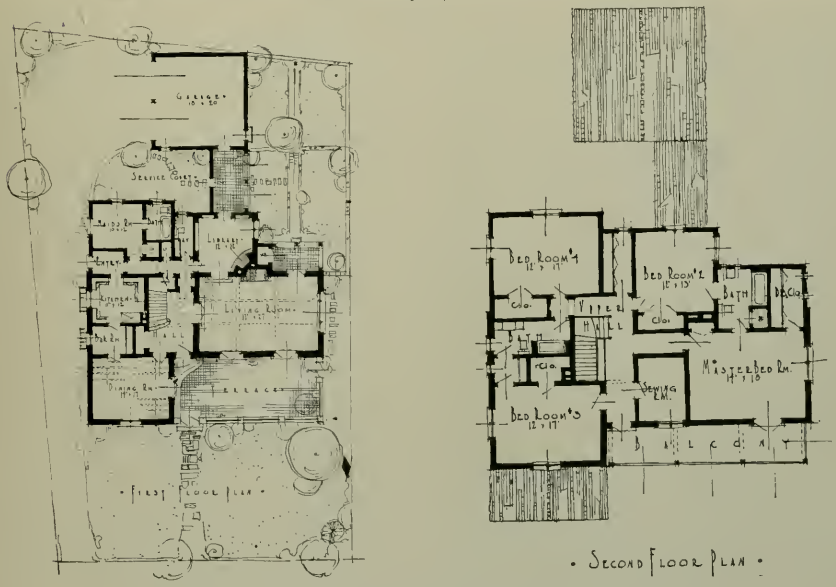
RESIDENCE OF FRITZ T. HENSHAW, PIEDMONT, CALIFORNIA
Sidney B. and Noble and Archie T. Newsom, Architects



PLANS, RESIDENCE OF FRITZ T. HENSHAW, PIEDMONT, CALIFORNIA
Sidney B. and Noble and Archie T. Newsom, Architects

COMMUNITY SEMI-DETACHED RESIDENCE APARTMENTS, NORTH BERKELEY
EDWIN L. SNYDER, ARCHITECT

RESIDENCE FOR F. B. TRAVERS, CLAREMONT PINES, BERKELEY
Edwin L. Snyder, Architect



PLANS, RESIDENCE FOR F. B. TRAVERS, CLAREMONT PINES, BERKELEY
Edwin L. Snyder, Architect

RESIDENCE OF DR. H. H. HITCHCOCK, BERKELEY
Edwin L. Snyder, Architect

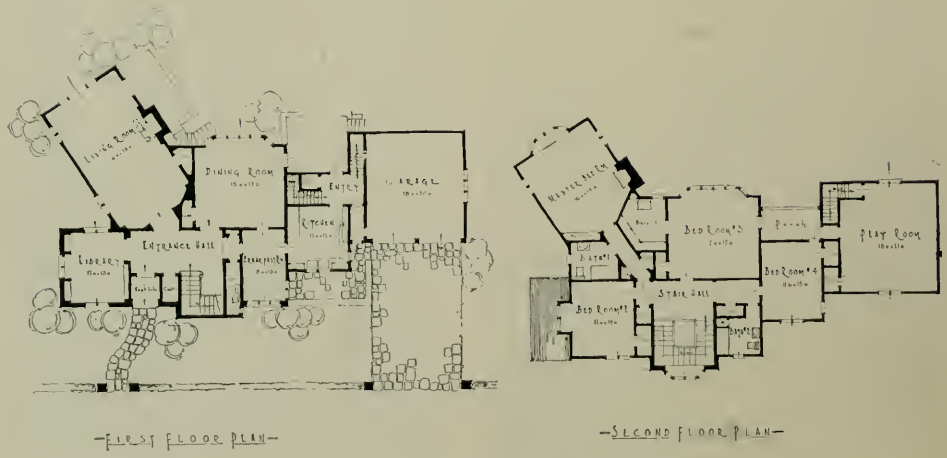
PLANS, RESIDENCE OF DR. H. H. HITCHCOCK, BERKELEY
Edwin L. Snyder, Architect

RESIDENCE OF DR. H. H HITCHCOCK, BERKELEY, CALIFORNIA
Edwin L. Snyder, Architect

RESIDENCE OF DR H. H. HITCHCOCK, BERKELEY
Edwin L. Snyder, Architect

RESIDENCE OF DR H. H. HITCHCOCK, BERKELEY
Edwin L. Snyder, Architect

RESIDENCE OF H. C. REID, BERKELEY, CALIFORNIA
Edwin L. Snyder, Architect



—First Floor Plan— —Second Floor Plan—

PLANS, RESIDENCE OF H. C. REID, BERKELEY
Edwin L. Snyder, Architect

RESIDENCE OF H. C. REID, BERKELEY, CALIFORNIA
Edwin L. Snyder, Architect

LIBRARY, RESIDENCE H. C. REID, BERKELEY
Edwin L. Snyder, Architect

STAIRCASE, RESIDENCE OF H. C. REID, BERKELEY
Edwin L. Snyder, Architect

Photo by Starrett Studio

RESIDENCE OF M. C. CHOTINER, LOS ANGELES

L. G. Scherer, Architect

do you know! These were clients who gave the most and readiest co-operation! It is a fact!" That settled that. And the Telfer home is truly lovely, plan and all.

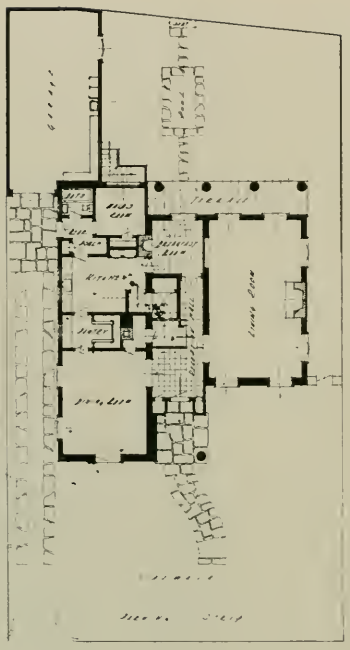
We liked the attitude of never forgetting that the fine domestic architecture of our foreground does not "just happen" but requires sensibilities above and apart from the effects of struggle and toil.

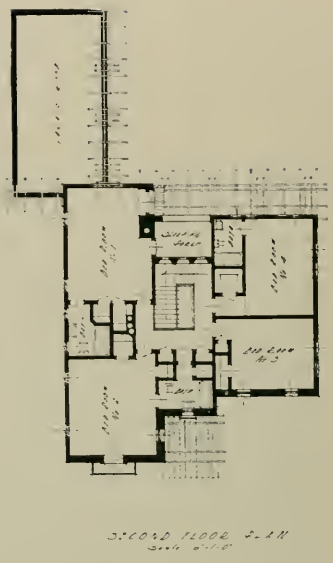
We have seen the "give and take," the fine adjustments, and conscientious care practiced by architects. The evidence proves it is a characteristic, and we hope for greater and greater things from the many stabilized artists. We crave understanding and appreciation for them that they may also be inspired to go on and ever on, helping to realize the solutions of the problems of our stage.

It ought to be unnecessary to even mention it; but as in other professions, others are heard and sometimes followed.

Seriously, the advance in architecture has always been by those who gave it study. Study alone produces the finesse of present day work such as found in our foreground and elsewhere conspicuous in industry. The power for intensive study is not found outside the architectural profession. When shortcuts are held out, one may be sure, something is missing. The true artist never dreams of leaving a problem until it is the best possible. It behooves us to search him out. Seldom will he acclaim himself.

RESIDENCE OF MILTON CLARKE, SAN FRANCISCO
MASTEN AND HURD, ARCHITECTS





PLANS, RESIDENCE OF MILTON CLARKE, SAN FRANCISCO
Masten and Hurd, Architects

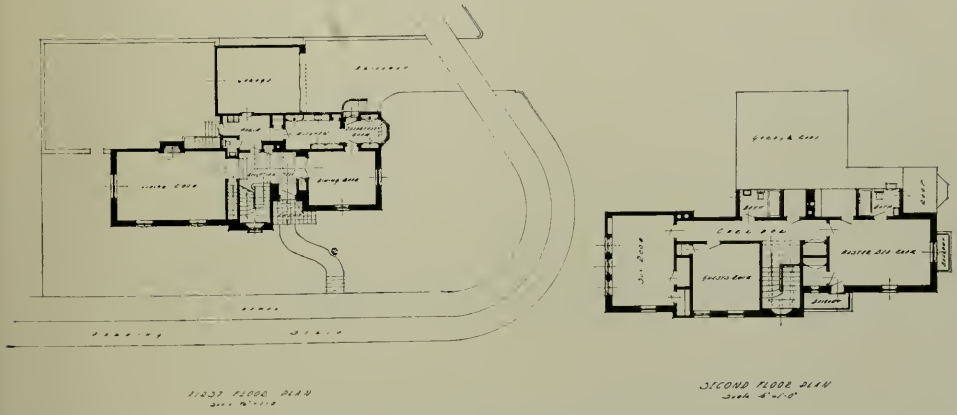
MY IDEAL OF A GARDEN

By Walter P. Eaton

I NEVER count the sheep jumping over a fence in order to get to sleep. Instead, I lay out a garden. On the rare occasions when even this doesn't work, I design the house which faces this garden. But I have never yet got inside the house. I am always fast asleep by the time its outer aspects have completely shaped. It is a curious fact, which I don't pretend to explain, that in this process of garden and house designing, behind closed lids in the dark chamber, I see the result with unusual vividness, and, once the image comes, it no longer feels to me like any creation of my own, but rather like some remembered picture of an actual spot. Doubtless, of course, many features of my semi-dream houses and gardens are memories of actual spots, or of photographs of actual spots. Yet it is I who have combined them into a new whole. I ought not, in all modesty, to be so pleased as I often am with the result, or deduce therefrom, quite *ex cathedra,* laws of gardening and architecture.

To my mind the ideal garden has fewer flower beds and fewer set flowers than is commonly the practice. It is knit far more intimately with the side or the rear of the dwelling than is often the case. The ordinary dwelling has an entrance which con-

RESIDENCE OF FRED S. McCORD, SAN FRANCISCO
Masten and Hurd, Architects



PLANS, RESIDENCE OF FRED S. McCORD, SAN FRANCISCO
Masten and Hurd, Architects

HALLWAY, RESIDENCE OF FRED S. McCORD
Masten and Hurd, Architects

STAIRCASE, RESIDENCE OF FRED S. McCORD
Masten and Hurd, Architects

veys the sense of protected reserve. You must climb a porch and knock. If you are admitted, you must enter a portal. This is right and proper on the front of a house. But to get into the garden implies that you have been found worthy of first getting into the house, and consequently the garden should be like an outdoor room, with no more formality of entrance or exit than exists between rooms of the house itself.

Somehow it is managed, in those visions of mine, so to treat the rear or side of the dwelling that the entrance here, from the garden, is simple, easy, hospitably open, and as you look upon it from the garden paths you do not see the details of the front portal reproduced at the back, but rather just a way into another room, whether through the wall direct or through the grateful shadow of a veranda. The diminution in the usual number of flower beds, of course, is part of the demands of a room. You must have free floor space and no clutter of furniture. So my garden has a soft green carpet and sparse furniture, but on the walls, as it were, that are at face level or higher, plentiful bloom of flowering shrub or tree or the tall, stately plants of the border.

A second law I have deduced from the gardens I see in the dark behind my eyelids (and which I have confirmed by observation in the far less satisfactory world of actuality) is that the ideal garden cannot be built, the ideal estate achieved, without somewhere in it, fairly close to the dwelling —and by fairly close I mean from a hundred to a thousand or even two thousand feet, according to the size of the whole establishment—a wall of foliage with a shadow cave or two leading mysteriously into its velvet green depths. This may appear a ridiculously arbitrary statement, yet I believe it to be the law and the gospel.

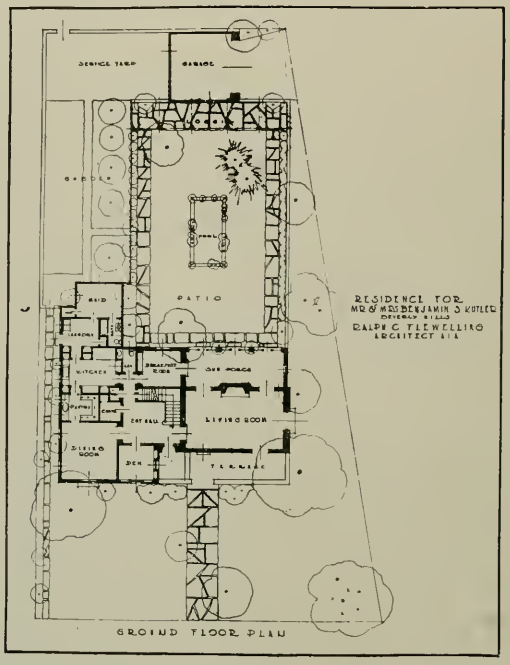
Two of the most successful actual gardens that I know are those of Daniel Chester French and Stephen Parrish (both artists, by the way). They are also among the simplest of gardens. Both are built against a hill, one at the bottom, the other near the

[Please Turn to Page 92]

Photo by W. M. Clarke

RESIDENCE OF BENJAMIN KUTLER, BEVERLY HILLS, CALIFORNIA

RALPH C. FLEWELLING, ARCHITECT

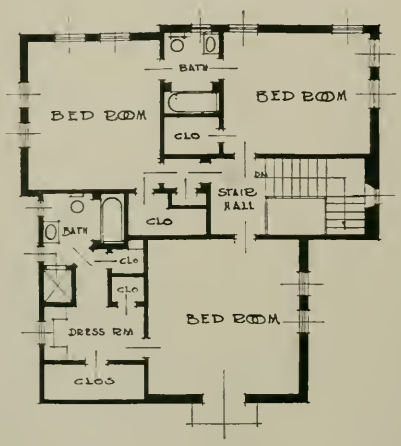


PLAN, RESIDENCE OF BENJAMIN S. KUTLER, BEVERLY HILLS
RALPH C. FLEWELLING, ARCHITECT

Photo by W. M. Clarke

RESIDENCE OF BENJAMIN S. KUTLER, BEVERLY HILLS

RALPH C. FLEWELLING, ARCHITECT



SECOND FLOOR PLAN

PLAN, RESIDENCE OF BENJAMIN S. KUTLER, BEVERLY HILLS
RALPH C. FLEWELLING, ARCHITECT

Photo by W. M. Clarke

RESIDENCE OF BENJAMIN S. KUTLER, BEVERLY HILLS

RALPH C. FLEWELLING, ARCHITECT

Photo by W. M. Clarke

RESIDENCE OF BENJAMIN S. KUTLER, BEVERLY HILLS

RALPH C. FLEWELLING, ARCHITECT

Photo by W. M. Clarke

RESIDENCE OF BENJAMIN S. KUTLER, BEVERLY HILLS

RALPH C. FLEWELLING, ARCHITECT

RESIDENCE OF BENJAMIN S. KUTLER, BEVERLY HILLS
RALPH C. FLEWELLING, ARCHITECT

Photo by W. M. Clarke

RESIDENCE OF BENJAMIN S. KUTLER, BEVERLY HILLS

RALPH C. FLEWELLING, ARCHITECT

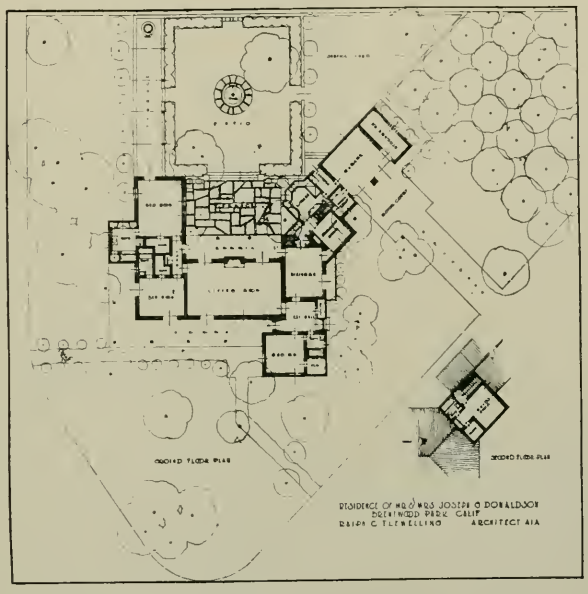
Photo by W. M. Clarke

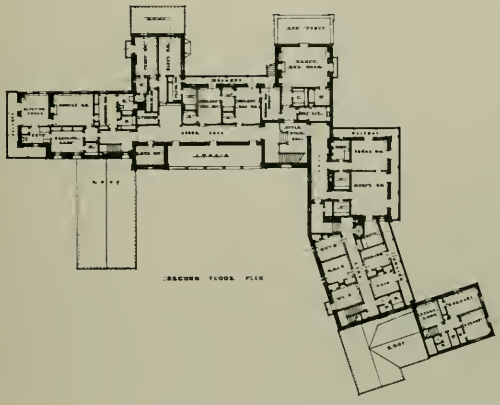
RESIDENCE OF JOSEPH G. DONALDSON, BRENTWOOD PARK, CALIFORNIA

RALPH C. FLEWELLING, ARCHITECT

PLANS,
RESIDENCE OF
JOS. G. DONALDSON,
BRENTWOOD PARK,
CALIFORNIA

Ralph C. Flewelling,
Architect





PLANS,
RESIDENCE OF
ROBERT B. HENDERSON,
HILLSBOROUGH,
CALIFORNIA

Gordon B. Kaufmann,
Architect

RESIDENCE OF ROBERT B. HENDERSON, HILLSBOROUGH, CALIFORNIA
GORDON B. KAUFMANN, ARCHITECT

Photo by Maulin

THE AMERICAN DWELLING HOUSE

By Lewis Mumford

WHEN a man builds a house for himself, says a contemporary French critic, he is not content with a building; he seeks to create a poem. The dwelling-house is the last romantic place of refuge, the last portion of the environment wherein a man can express himself, and fulfill his personality, and live after the manner of his dreams.

But what poetry! what dreams! Putting to one side the majority of the population, condemned to live in the ramshackle flats of Boston, the mean tenements of New York, the orderly rabbit-hutches of Philadelphia, the slum-bungalows of the Middle West, to say nothing of niggardly farmhouses all over the country—what remains is still unsatisfactory. The poems are hackneyed, labored, above all lacking in sincerity; not one house in a thousand has been thought out in all its relationships. Perhaps it would clear the atmosphere a little if we dropped the notion that a house should express personality, and began to consider it in terms of its essential functions. A fresh-water bath of rational criticism would clean off the barnacles that sloppy feeling and misdirected interest have allowed to accumulate on the bottom of the subject.

It will be easiest to define the modern point of departure if we think back a generation to the old-fashioned house—that vast, roomy, formidable building which either made one of a row of deep buildings in New York, Philadelphia or Baltimore, or stood alone in spacious ugliness in such Middle Western cities as Cleveland.

That old-fashioned house was exceedingly rudimentary in its functions and very complicated in its ornamental detail. In winter it was heated by hot air; at least a part of the house got some of the heat. The kitchen contained a self-sufficient coal range. The bathtub had only recently become a necessity, and the toilet had but a generation before entered the interior of the house. The paving in front, and the various street connections, were all simple and elementary, even in the city; in the country the cesspool was still an innovation. With these elementary facilities for services, such a house should have been an easy one to live in; but the exact opposite was true, for it existed, not to shelter the inhabitants, but to mark the status of the owner in society, and all the economies of its crude working elements were destroyed by the debris of decoration under which every nook and corner groaned.

The floors were covered by carpets, laid over wadded paper; the fifteen-foot ceilings terminated in elaborate cornices of plaster; the mantel-shelf was covered with bric-a-brac, and the hearth contained a dusty bouquet which might have been burned with profit had the flues been capable of working. In proportion as the wealth and prestige of the owner grew, more and more of the space was taken up by elegant dust-collectors, regarded as objects of art and beauty. Writhing in curley-cues, bitten with random indentations, the furniture retained dust in a hundred crevices, and added thereto the luxury of superfluous ugli-

EDITOR'S NOTE—Mr. Mumford's original contribution appeared in *The American Mercury*, to which publication we are indebted for these excerpts.

Photo by Moulin

RESIDENCE OF ROBERT B. HENDERSON, HILLSBOROUGH, CALIFORNIA

GORDON B. KAUFMANN, ARCHITECT

ness, while the washing of the crystal chandelier, the sweeping of the carpets, the periodic cleaning of the china closet and curio cabinet, were all Sisyphean operations which broke the backs and the hearts of a whole generation of decent menials. This house had, from the standpoint of today, only one virtue: in spite of its clutter and litter it was still spacious. There was space to breathe in, if not room to move around in. But owing to fantastic notions as to what constituted hominess, comfort, and beauty, such houses were little better than kitchen middens, and the amount of useless labor they entailed upon generations of housewives and servants makes one gasp and sweat to think about.

The old-fashioned house was undermined by three different factors. The first of these was the gradual development of taste. Strange as it may seem, this cause was the first to operate, for it came into existence during the eighties, partly through the influence of a few distinguished architects like Richardson and his pupil, Stanford White, and partly because of the impression made by craftsmen like William Morris and popularizers of Ruskinian ideas like Oscar Wilde, who made a tour of America and spoke audaciously on the subject. A little later Gustav Stickley, the founder of the *Craftsman* magazine, brought to the design of houses and furniture a certain sobering sense of reality which, if it rarely achieved beauty, still served as a thrust against the aimless debauchery of house-design since the forties.

Taste was, and still is, largely a negative influence with us; but it had the happy effect of inexorably ruling out, one by one, the sentimental dew-jigs, the auction room bric-a-brac, the multiplicity of bad reproductions and fatuous engravings that were once the authentic symbols of domesticity. Charles Richards, our foremost authority on industrial art, is in the habit of illustrating this change by two pictures, one of a Smith girl's dormitory in the eighties, filled with flags, mottoes, samplers, and sheer junk, and the other of such a room today, with little in it but the necessary chairs, lamps, brightly colored walls, and perhaps an occasional print or two.

The second limitation that helped ruin the old-fashioned house was the difficulty of obtaining menial service. Our perverse conception of the dwelling as something between an auction room and a museum was carried on the backs of servants; without them, the elegance and the ugliness would have been alike impossible. Like modern soldiers, these wretches were brought up to the battlefront of domesticity with little training, if any; kept dusting and scouring and oiling and scrubbing and climbing until they were exhausted, or, in vain rebellion, looked for lighter work in homes of their own, and when they were unfit for service their ranks were filled by fresh levies of gullible recruits from Ireland, Germany, or Sweden. Occasionally, growing daughters, in the more modest homes of America, were used as substitutes for the menial; certainly, the heroic task of keeping the old-fashioned home moderately fit to live in was nothing for anyone to achieve single-handed.

The rebellion of growing daughters and what has been called for two generations the servant problem came at about the same time; in addition, as the American family became smaller, the overhead of domestic service became disproportionate; and it needed only the restriction of immigration through the war and later legislation, from 1914 onwards, to raise menial service into the ranks of a luxury. People who always kept a cook and a maid were forced to reduce their establishment to a single domestic; and those who managed before with one now relied only on sporadic help.

The old-fashioned house could not survive this constriction; when the maid went, a good part of the furnishing perforce went with her. What taste was achieving in slow stages was economics forced upon the home with a peremptory gesture. The question became, not *how* much can we show, but how much can we put in the attic or the junk-heap and still keep our status and station intact in the eyes of the neighbors? If sentiment acted as a brake, necessity was an accelerator.

Finally, a third element, perhaps more exacting and relentless than either of the other two, corrupted the old-fashioned

home; this was the steady development of technical devices for enabling the various branches of housework to be done more expeditiously or efficiently. Along with this, went a general industrialization of household equipment: heating, cooling, refrigeration, cooking, washing, lighting, sanitation, and, with the introduction of the telephone and the radio, communication with the outside world, broke down the rough-and-ready domesticity of the past. On the one hand, a new array of soaps and chemicals to remove dirt; on the other, mechanical devices for keeping rooms at even temperature or disposing of waste. In the traditional house good design required, for instance, that windows should be reduced in size to the minimum needed for light and ventilation, since hot-air-heating was incapable of coping with the leakage through large window surfaces in cold weather. Such considerations may not be altogether ignored in an economic design today; but they are no longer imperative. So too, the old-fashioned icebox was usually separated from the kitchen; today, with the invention of more effective insulating materials, and with domestic gas, the refrigerator becomes an inevitable part of the kitchen.

II

Since such utilities were introduced and absorbed, one by one, into the modern house, over a considerable period of years, their influence upon construction and design was never properly analyzed or appraised. So far as I know, the first person who attempted it was Henry Wright, who five years ago, in the *Journal* of the American Institute of Architects published a series of graphs and diagrams which showed that the amount spent on mechanical utilities had risen from almost zero in 1800 to from 20% to 25% of the total cost of housing — and was still rising. None of the other costs has gone down; on the contrary, they have all gone up in about the same proportion as other commodities: so it is obvious that this extra 25% must be "found" somewhere, all the more because such inside utilities as electric lights and bathrooms need expensive outside connections with lighting mains and sewers; and though the owner may be unaware of it, these costs enter into both the original price and the upkeep.

Mr. Wright suggested that the change had been met in two ways. One was by a process of consolidation: that is, by putting a number of households under one roof, and so decreasing the cost of pipes and connections and cellar and roof per unit. In brief, our mechanical improvements tended to improve the free-standing single-family house, known to song and story, out of existence, even in little towns and suburbs where there was no shortage of cheap land. The other was by a shrinkage in the cubic contents of a house: the fifteen-foot ceiling gave way to the eight-foot ceiling, and families that had once luxuriated in nine or ten rooms somehow contrived to coop themselves up into five or six, with a corresponding diminution of space all along the line. Space disappeared. Instead of elbow room, the new house had labor-saving devices, slick mechanical contraptions. If one corrects for income and the value of the dollar, the total rise in the cost of housing during the last fifty years has not been as portentous as the radical re-distribution of these costs. The mechanical house, within a generation, had worked havoc with the sentimental house; the budget schedule had cruelly defaced the poem.

The mechanical utilities which now characterize the modern house have not yet been rigorously appraised for their several contributions to life-efficiency. Let us examine the positive gains that have been made. First, these devices have partly transferred the burdens of housekeeping from the back of a human being to the indifferent shoulders of a machine; in fact the construction of domestic service would have created a really serious situation if such mechanical auxiliaries had not taken up the task at the point where the vanishing menial put it down. Some of these aids have succeeded more than others. The automatic oil or gas furnace is far more effective in relieving labor than, say, the vacuum cleaner, although the latter promotes efficiency and hygiene when applied to the old-fashioned house. Again, the indirect result of mechanical improvements, namely, that they have decreased the amount of space in a

Photo by Moulin

RESIDENCE OF ROBERT B. HENDERSON, HILLSBOROUGH, CALIFORNIA

GORDON B. KAUFMANN, ARCHITECT

Photo by Moulin

RESIDENCE OF ROBERT B. HENDERSON, HILLSBOROUGH, CALIFORNIA

GORDON B. KAUFMANN, ARCHITECT

house, is not altogether a matter for weeping and regret, for every reduction in the area of floors to be swept or polished, or to be traversed in answering the door or the telephone, or in cooking dinner, is a reduction of labor. The constriction becomes annoying only when one endeavors to maintain the habits, tastes, standards, forms of life which went with the old-fashioned house.

Both the house and the apartment today, it is pretty plain, are merely transitional types. The changes that have been effected in them have been forced from the outside, without sufficient imaginative effort to meet and mold them. It is this final stage in the relation of need and desire that we must now enter. The modern houses which we grudgingly accept and attempt to soften and prettify must be transformed into something superb and creative in their own right —not a half-baked machine, still less a flimsy piece of imitation Spanish or Tudor, nor yet a pallid compromise between fading memories and new opportunities.

III

What is the modern house? The only way to define it is to ask ourselves what any house is in terms of its essential functions.

Primarily, a dwelling-house is a biological institution. At one time or another to be sure, it has been made, by accident, to serve many other purposes: the nobleman's house has been fortified for warfare, the city tradesman's house has contained his shop and office, and the opulent financier's house has been a means of exhibiting his financial solvency or proud winnings. But when one strips away the excrescences, and asks how the house differs from the factory or the office, one sees that it is primarily a building equipped to serve the normal functions of nutrition and repair, reproduction, and the elemental care of the young. It is, to expand the definition, a place where food can be readily prepared and served, where the hygiene of the body can be attended to, where sleep may be secured with a minimum of friction and disturbance, and where—let us speak with medical rigor—the sexual act may be performed in privacy.

Sociability, entertainment, hospitality, complete the notion of the home; but they do not by themselves make the house. Various special institutions may, of course, take over one or another of these biological functions. The restaurant may specialize in food or the hospital in the care of the sick; but the place where these things are made commonly available for the mass of mankind is the dwelling-house. Anyone who doubts that we are dealing with a permanent institution has only to investigate the economics of housekeeping; no specialized institution that must reckon with physical overhead and wages, to say nothing of profits, can compete with the domestic communism of the house.

Once we accept the notion that biological functions create the norm of the house, problems of design that were once based upon taste or caprice must be treated within well-defined limits. The first question of all is orientation for sunlight and ventilation, and in every urban community this is a matter which rests, not so much with the individual builders as with the city plan. Above the tropical belt, good house design requires that a maximum amount of sunlight be permitted to enter the rooms, particularly those that are most constantly lived in—the kitchen, the living-room, and the children's nursery or play-room.

This is a point where almost all our present architecture, in one fashion or another, falls down. The city apartment is, alas! usually surrounded by other high buildings which cut off the free circulation of air and block a good part of the sunlight, and even the suburban apartment wantonly wastes its opportunities because the builder continues to overcrowd the land—without the shadow of a serious economic excuse. Genuine sun-porches are still mythical; yet probably worth a whole day's exposure with clothes on; and the architect who does not incorporate a private sun-porch in his plan need not pride himself upon his cleverness in the kitchen. It may be that the problem will remain architecturally insoluble in our congested centers until we drop our false modesty and face nakedness itself as cheerfully as we have faced the rapid approach to it in women's dresses; at all events whether

the solution be in the realm of building or etiquette, we must include it in the program of the modern house.

Exposure to the sun is a vital matter, particularly to children, and above all in the winter; but in our torrid summers, clear up to Maine, the capital problem is a different one, namely, how to temper the heat and secure an adequate circulation of air. Artificial refrigeration, such as is now provided in many moving-picture houses, is a very doubtful domestic expedient; when one leaves the cooled quarters to return to the superheated air of an August day, the result is not merely disgusting but dangerous. Summer ventilation depends upon two things: the provision of gentle drafts, partly by exposure to the prevailing winds, supplemented on still days by fans or blowers, and the provision of shade trees and foliage which absorb the heat without re-radiating it to the extent that stone and asphalt do. The problem here is to reduce the amount of paving about the house to the lowest possible point. Fortunately, good community planning demands exactly the same thing, since domestic streets should be wide enough only for service and access not for through traffic.

Trees and gardens thus become an essential part of the environment of the modern house. In addition to their beauty and the pleasure of their cultivation, they perform a mechanical function with an exquisite automatism that no manufactured device can begin to compete with, and in the matter of costs, they win hands d o w n. A house deprived of trees and gardens is no more a modern house than a house deprived of sunlight; the notion of introducing concrete shrubbery and green tiles, which certain French and American architects have dallied with, falls down not for aesthetic reasons, but for more fundamental mechanical and physiological ones. The leader of the European modernists, Le Corbusier, is, I am happy to say, in agreement with this position.

With these criteria in mind, it is plain that much of our modern urban housing is obsolete before it is finished: obsolete and inefficient. No modernist facade can conceal these vital deficiencies.

IV

If the biological house is first of all a sunhouse, it is at the same time a playhouse. Without facilities for play, without floors that can be danced upon, without a room for children's games and constructions, without an external playground for ball and gymnastics, the house would be as incomplete as a furnace without a flue. Curiously, most Americans are under the delusion that they have provided sufficiently for play if they clutter up the once spacious backyard or back-garden with a garage containing a car which will take the family on a weekly picnic, or permit the older members a little freedom of movement at night. That there should be space for spontaneous games and exercises, and that each house should have such space immediately about it, is scarcely remembered any more. The playground is an after-thought, and when it comes, it arrives by way of the school, rather than the house itself, and only by good fortune will it escape a dose of organized piggishness.

But plainly, the need for play affects both the inner design and the exterior relationships. Considered from within, the modern house, no matter how small, must not be chopped up into a number of small compartments, not one of which is large enough to permit more than the original family to gather in and move about in and dance. Nor, while Prohibition remains in force, may the modern house relinquish the cellar, although there is now current more than one clever expedient—the Flagg house, for example, and the house on a pedestal proposed by the Brothers Rasch in Germany and Buckminster Fuller in Chicago—to do away with the need for this expensive excavation. The great domestic industry of brewing and wine making needs an apartment of its own for manufacture and storage; and the cellar, no longer entirely subterranean, is the obvious place for it.

Beside, the cellar has one further advantage: mid the order, compactness, neatness of the modern house at least one room should be sacred to the spirit of anarchy and insurrection; one place should remain where litter, disorder, the desire to accumulate useless mementos, will carry neither

stigma nor burden. Where the economic means are sufficient, there is no reason why this should not be a separate room; indeed, if memory serves me, Mr. Frank Lloyd Wright has at least once provided a repository for Grandmother's walnut furniture, dear Uncle Alfred's toupee, and the champagne corks that were popped on the night that the last century died; but at least, for the present, the cellar must be preserved. It is not without point that it should be the last refuge of freedom.

The old-fashioned house, the show house, insisted upon the inviolacy of each room. The parlor remained a parlor for "best occasions"; each other room kept itself to itself. The play-house demands space; and in demanding it, is more willing to have one large room serve three purposes than to perform three separate functions quite inadequately in three separate rooms. Outdoors, space again is the chief requirement for play; and except for a narrow group of rich people, it cannot be obtained even in a small place like "Middletown" without combining individual portions of land and creating common areas under certain provisions for common care and upkeep. The modern house, in other words, cannot solve its major problems by itself. This applies not alone to sunlight and play areas; it applies equally to such essential matters as quiet sleep; and in such functions as have been taken over by the community, education for example, it is only by community planning that the daily walk to school can be saved from the nightmare of automobile accidents.

No longer is the modern house four walls and roof on a patch of ground: it has become the nucleus of communal and domestic services with connections and filaments throughout the rest of the community. Its isolation c a n n o t be preserved; its self-sufficiency is a myth. To achieve the results of individualism it cannot escape the duties of co-operation. Today no one can build an adequate house who does not also take pains to create an adequate community.

* * *

So much for the programme of the modern house. I have been talking about sunlight, cleanliness, efficiency, space, hygiene, play; and I have dealt with these things as if I were ignorant of the fact that a home must be lovable and attractive as well as neat and efficient. Is there to be no decoration? Is life just to be a stale utilitarian formula? Is there no space then for personality, taste, for precious human intangibles? In short, shall there be no more cakes and ale? By no means: it is because all the biological requirements of the house must be met as preliminary to the robust development of the personality that I have been treating them first. They were forgotten in the old-fashioned show house, as completely as sexual intercourse and childbirth were forgotten in the Victorian novel; and in order to restore them to their true order of importance it has been necessary to over-emphasize them a little.

Now, however, in the modern house, the eye may come into its own. If the house be well-set and the surrounding land well-gardened, the wide windows meant primarily for the sun will open each day on a new picture. Against the bare walls, the flowers drawn from the garden will gleam more vividly; or, if not flowers, then pictures, which will no longer be mistreated as spots on the wall, nor smothered in a clutter of irrelevant decorations; and if the owner has taste and means, both the flowers and the pictures will be changed frequently.

With the background stripped clean of every piece of meaningless ornament, the foreground will become more prominent: the body, the face, the dress of each inhabitant of the room will not be absorbed by the furnishings, but will stand out in fine relief. The chief forms of decoration in the modern house will be living things: flowers, pictures, people. Here is a style of interior decoration that perpetually renews itself and that never goes out of fashion, because it is inexhaustible, the stable patterns and colors of the furnishings sounding antiphonally against the dynamic patterns and colors of the occupants. For the modern house is not built for show but for living; and the beauty it seeks to create is inseparable from the personalities that it harbors. Modern decoration does not hide the personality behind a pretentious front of decoration: rather, it remains incomplete,

until it is enriched by the presence of a human being. The old house was essentially institutional, for all its aimless freedom; the new house, despite its standardization, despite its rigorous design, has a greater respect for the uniqueness of personalities.

MY IDEAL OF A GARDEN

[Concluded from Page 66]

top. In one the path wanders across the grass from the marble fountain and disappears in the gloom of the hemlock forest. You know not what dryad or faun might come dancing down that lane of shadows into the sunlight and the smell of roses. In the other the path leads out against the shadows of the pines, and through their mystery to the sudden surprise of a great hilltop prospect. But in both gardens the forest wall gives that shut-in feeling, that sense of hush and remoteness, as no fence or hedge can do, and gives this feeling, too, by perfectly natural means. Moreover, there is a height, a beauty and unstudied grace — a richness and depth and broken quality of shadow in a tree wall which nothing else can even remotely approximate, while the path leading into such a wall, the shadow cave thus made, has a peculiar charm of mystery, suggesting alike unexpected entrants and unguessed delights for those who follow it forth.

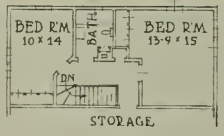
Perhaps, indeed, this necessity for the shadowed wall of foliage somewhere at the end of a garden is determined by the fact that the ideal garden must, as we have said, suggest a room—suggest, mind you, not actually try to be one. On one side of the garden sits the house, and if the architect has been wise this garden face of the house is not portaled as on the front, but is simple, domestic, intimate. Obviously, it is one side of the room. But somewhere the hint of another side is needed, especially when the garden is viewed from the house, to hold the green and flowered enclosure together, to bind it to the dwelling. A fence or hedge is not tall enough; a single row of trees is like a house wall built of mosquito netting. It must be a wall as tall as the dwelling, and seemingly as solid, but a wall of living green, of verdure in other words, the massed foliage of trees, with their incomparable grace of outline, broken shadow texture, mysterious allure and value as background for every blossom at their feet, every bit of garden ornament, every gown and hat and dancing child. With such a shadowed wall, the garden becomes intimate, secluded, a room indeed, an integral part of the dwelling. Without it, no matter over what marvelous blooms the eye may wander, to what exquisite prospect of distant peak or flashing ocean, the garden will be a laid-out thing, an artificial thing, not a part of the house, but an approach to it.

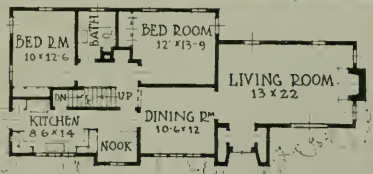
I grant you that such garden seclusion and intimacy as this is not easy to achieve, for we cannot all build our houses at the feet of a climbing hemlock forest or beside a wall of whispering pines. But they can be planted. They grow slowly—gardens cannot be made in a generation—and it is our children who will see beyond the daffodils or hollyhocks the mystery of their shadow caves. The first and perhaps the last secret is tree planting, not flower planting. I have dreamed lovely gardens with no blooms but shrubs and wild flowers in them, but never one without trees. The whispering wall of their foliage is as necessary as the welcoming wall of the house. The architect who plans the estate must provide for the one no less carefully than the other, or his work will never come to perfection.

Angelus Studio

HOME OF MR. CLAUDE W. KEMP
PORTLAND, OREGON.

EARL G. CASH ARCHITECT.

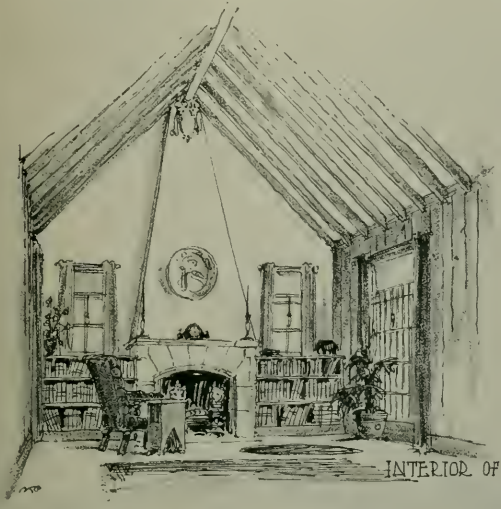




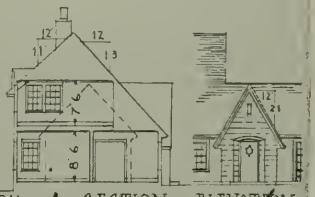
FIRST FLOOR PLAN

The unusual charm of this house is achieved by a broad expanse of roof relieved by sharp gables of unequal value happily placed. The high roof provides space in which two rooms and bath may be added as the owner requires.

The wide window with a single fixed sash from eaves to floor is a distinguishing feature of the living room. . . . . The sketch shows a raftered ceiling without horizontal tie beams, the omission of which necessitate a ridge beam of sufficient strength to support the rafters at the center. . .



INTERIOR OF LIVING ROOM.



SECTION ELEVATION

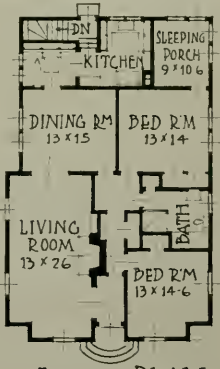
SRIS 3A

Courtesy National Lumber Manufacturers Association

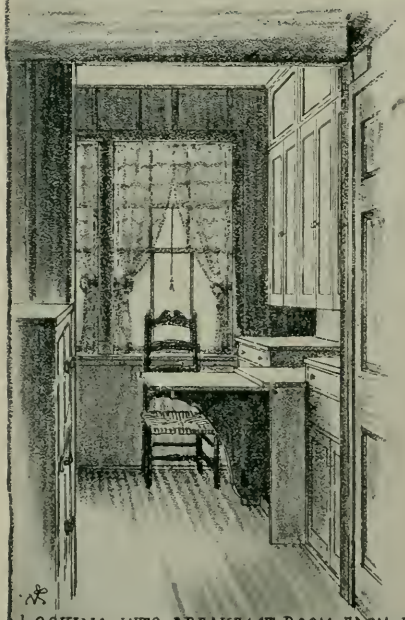
Norton Studio

HOME OF LLOYD Y. GRAHAM. SAN LEANDRO, CALIF.

The pleasing outlines of this white cottage are sharply contrasted both in color and form against an invaluable sylvan background. The architect has used this advantage to the fullest extent in creating a design which complements it most admirably.



FLOOR PLAN



LOOKING INTO BREAKFAST ROOM FROM KITCHEN.

The breakfast room (7'-0" × 8'-0") is large enough to accommodate a folding ironing board and a commodious pantry cupboard. The counter top is fitted with a drop leaf of table height, supported by a swinging arm, that can be dropped out of the way when not in use.

5RIS-1A

Courtesy National Lumber Manufacturers Association

RELATION OF ARCHITECTURE TO LANDSCAPE ARCHITECTURE

By Florence Yoch

IN progressive stages through the centuries since the atrophy and disintegration of the Renaissance, the architect has sloughed off many of his former attributes —such as painter, sculptor, worker in fine marbles and designer of great gardens.

The newer developments of science and modern living requirements have produced another category of applied arts — plumbing, various electrical arrangements, heating and ventilating and the handling of steel. All of these are expressions of the modern trend toward utilitarianism and increased physical comfort.

The older arts, however, were too highly developed to be discarded. Civilization has absorbed them and demands their continuance. In the readjustment they have fallen to the lot of specialists, or, if you prefer, lesser men. Each one of them has gone through the long period of decadence and the valley of shadow that is typified by the wooden glories of cookie-scalloped Gothic architecture. Now Bacon comforts the landscape gardener with his graceful but much quoted: "You will ever find as the ages grow in ability and elegance, men come to build stately sooner than to garden finely, as though gardening were the higher art." A franker interpretation is probably that architecture is, and necessarily must be, the dominating and determinative art. All the others are fundamentally purely amenities. Architecture is equally as enduring and formative of men's minds as political institutions. Witness the living importance today of Grecian architecture with Roman law.

Any article made by man, from the smallest and most useless bauble to the most complexly functioning building, is subject to rules of design and is conditioned by intentional use. I think you will all agree that in the applied arts, use is the prime factor influencing design. Materials can be beaten, bent, carved and moulded to serve utility, but in the so-called "pure" arts, materials often dictate the expression.

Landscape gardening follows the parallel of architecture, and is only expressive and completely interesting when treated as an applied art with a definite and legitimate function. When a man-made landscape loses human relation and claims as its reason for b e i n g mere beauty, it rarely succeeds. Charles Eliot aptly described landscape architecture as "the art of fitting the land for human use and enjoyment."

Here, as elsewhere, all genuine design springs from absolute need. In landscape gardening the contributing and limiting elements are climate, water conditions and materials available — whether p l a n t or building. These are subjected to the influence of racial characteristics and demands, and the net result in every case is type or style.

Getting down to first principles in this manner is exactly comparable to studying primitives in the graphic arts. One is led to the realization that in the peasant gardens we find the essential qualities of each race or nation. The larger and most sophisticated run to a type. Just as there is a norm or glamorous ideal for other amenities in life, we find the more elaborate gardens trending toward a sameness or universality, whichever you prefer to call the lack of distinctive national character. We have French cooking, German music, English servants,

Address delivered at meeting of Southern California Chapter, A. I. A.

Italian gardens advertised all over the earth's surface.

Very definite types of landscape art reflect the life of each people. The formal French city plan—the informal English village plan — is each perfect in its function and expression of beauty. The austere settings for great public structures consummately handled by the French; the peaceful effect of the English park; the cosy charm of English domestic work; the regal splendor of the Italian pleasaunce have never been successfully imitated by any other people.

Among the humbler folk we see outdoor living arrangements even more intriguing. No Italian peasant is too humble to have his scrap of paved terrace where most of the domestic rites take place. They are frequently perched on steep hillsides overlooking stupendous views, and always revealing the same unconscious, almost dramatic sense of the picturesque that is inherent in their race.

The Spanish peasant's patio provides indolent comfort in the most compact form. Interest and beauty are never lacking. The sharp contrast of white walls with interesting leaf texture and strong shadow; always some sort of fountain which is utilitarian as well as attractive, complete these beguiling little gardens.

The English cottage garden is famous the world over for its splashes of brilliant flower color. There is a poetic atmosphere of delicacy that we do not find in the more arid climates.

In France, the little potagers of the peasant indicate the Frenchman's thrift and his artisanry. Nowhere have economy of space, shipshape straight lines and determination to wrest the last ounce of productivity from the soil; nowhere have these things produced such an effect of smartness and interest as in France. The very name "potager"—place from which the potage comes —gives one a sense of its compactness. Peasant gardens owe a large part of their naive charm and interest to the materials of which they are ordinarily made. The poor man must construct walls, dipping wells or other utilities of the materials most near at hand and most practically adapted to general use.

One of the greatest interests in building gardens in California is the variety of materials available to harmonize with the many styles of architecture. It does not seem to me that our most interesting local gardens are necessarily those where alien and elaborate materials have been commandeered by the carload. Here, as elsewhere, an expressive and functioning use of logical materials tells the better story.

Landscape architecture properly approached is an art of design, and the adequately trained members of the profession nowadays receive an education in design as well as horticulture and engineering, and should have a thorough appreciation of architectural types and requirements, so that each garden can be properly subordinated to the house and complement it. The old days of bush-whacking gardening are rapidly disappearing, and a genuine collaboration between the architect and landscape man results in many practical advantages to the home owner. A study of the site for contours, garden aspect and location of outdoor utilities should be thoroughly made even before the house is designed.

This is an era of machinery and commerce, compelling men to congregate in the cities, and we find with increasing wealth, following Lord Bacon's dictum, men are coming to desire to garden finely in their city homes. Most of the cities of Europe are relics of the past, and a thorough search for interesting garden settings, for finer homes throughout the continent will result in disappointment, which is due to the fact that most of the really interesting old places were built when cities were very congested, had narrow streets, and no opportunity for gardens other than small interior courts.

Since the days of modern building, most of the European countries have been absolutely inert in the matter of architecture. The great exception to this is, of course, Paris, where many fine and costly homes have some attempt to garden setting, but even here it is not the best period of French architecture or landscape work, but the more decadent recent types that we find. In a thorough canvassing of such widely separated cities as Madrid, Florence, Brussels, London, New York, the same general con-

ditions prevail — many examples of work that is merely expensive but not satisfying.

It is apparent from various indications that the coming era is typified by and probably belongs to America. It is natural enough that in the rapidly developing American cities we are finding the most logical and efficient and therefore pleasant expression of architecture and garden work. In America the general level of architecture is higher and the results are more interesting in Southern California than any other section of this broad land. This is due to the fact that while our local architects have drawn freely upon the examples afforded by all of the climates of the world similar to ours, they have in the past few years come to a very definite study of our local demands and conditions, and are producing an inherently Californian type of house.

It is interesting to analyze the reason for this. The majority of people are attracted here by the climate and the possibilities for outdoor living. On arrival, however, they find that here as in the rest of the world they are usually too busy to give up the ideal amount of time in search of outdoor living. Therefore, it becomes the function of the architect to provide for this contingency by designing a house which brings the outdoors in as close as possible relation to everyday living. This results in the increasing use of patio, terrace, arbor, pergola, loggia, veranda, balcony, and provides the principal link between the architect's work and that of the landscape man.

BATHROOMS ADVANCE TO MEET MODERN NEEDS

GEORGE HOKE, in *Building Age*, says that the "new" bathroom bears little resemblance to the old, save for the fact that it is still used for the purposes of cleanliness and health. It may be located in its same old place in the house, but the changes effected in that room by common sense and good plumbing make it a new room.

Builders realize that home owners and apartment dwellers are progressing in daily practices of sanitation and health and have more knowledge of what constitutes real comfort. They no longer tolerate a chilly bathroom, thin streams of lukewarm water, inadequate lighting and inconvenient arrangements. Not only that, but growing appreciation of color and beauty are demanding satisfaction as much in the construction and decoration of the bathroom as in that of any other room in the house.

Furthermore a home owner realizes he must have complete bath and toilet equipment to give growing sons and daughters the privacy they should have. Children are more easily taught the health value of everyday cleanliness if it is made easy for them to live up to health instruction given them in the home or at school.

Tile in a beautiful assortment of colors, washable and waterproof paper, cork tile, plastic paint, rubber blocks and composition materials meet every demand possible in a bathroom. We may combine three different materials for floor, baseboard, wall and ceiling with admirable results. Color and texture effects are not the least of the charms of these new materials. They are waterproof, steamproof, vermin-proof and are more easily cleaned than many of the old style wall and floor coverings.

It is now possible to purchase, and they belong in the new bathroom, recessed medicine cabinets, toilet article cabinets, paper holders, soap holders, towel holders and even recessed electric heaters. These small spaces for electric heat connection will prove a great boon on the cool days when a little heat is needed in the bathroom and the furnace has not yet been started, or has gone off duty for the summer months.

The radiator, once a thing of necessity but certainly not of beauty, has had many life changes in late years. First it was of iron and exposed, now the iron or copper radiator is recessed. In appearance, in function and in durability it speaks for itself and is as much a part of the new bathroom as the tub itself.

No one doing a thorough piece of renovation would select any other than the built-in tub made either for tile sides or with full apron to the floor. Its beautiful lines are not its only claims to favor for in installing

[Please Turn to Page 106]

The ARCHITECT'S VIEWPOINT

- *Architect Should Love His Work*
- *A Few "Donts" For the Owner*
- *Railway Stations Need Architectural Control*

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HAPPY be the architect who loves his vocation. From the first moment of comprehension of what the work in hand is to be until its consumation in the finished edifice, love of the work is and should be the guiding inspiration.

Lacking in wisdom is the client or patron who allows himself for one moment to obstruct the unfolding of this love for what the architect has before him. This does not mean that the client should not make clear to the architect the necessary requirements and qualifications of the problem as he, the client, sees and appreciates them. Just the reverse. He should state them, carefully and clearly, as a starting point for the architect's mental processes. If, upon analysis, ambiguities are evident or impossible equations develop, the architect will set forth the difficulties and work with the owner to help him make his choice. But through the whole episode runs this thread of love for the work. One might say that it was a woof of wisdom upon a warp of affection.

As the spelling books of a couple of generations ago had it "Give me, oh give me," says Carlyle, "the man who sings at his work!" The art of architecture has been compared with the art of music. If this parallel be true a song of happiness should run through the whole episode of the designing and construction of a building.

How often it is that a client looks upon the work of building with apprehension and worry. He is afraid that his ideas will not be carried out, nor his personality expressed in the appearance of the building. The conscientious architect will naturally incorporate the ideas of the client into the design so far as it is possible to do so. An architect who is touchy may not like to do this, thinking that his own personality will not be satisfactorily expressed. If he is a man of real ability he need not be apprehensive. He cannot help expressing his own talent in his work no matter what difficulties have to be met.

A word or two of caution to the client. Select your architect with care. After that be not guided overmuch by the recommendations of your personal friends. In your preliminary conferences with your architect, do not be too mandatory and conclusive with your requirements. Reserve your opinions as to how the theme should be worked out. All of this so to leave the architect free to use his brains while studying the problem. Do not deny yourself the most valuable service that you are paying the architect for. Give him his chance to use his creative talent. If he has none you should not have selected him in the first place. There are plenty that have talent and some that have genius.

If, Mr. Client, your problem is a dwelling house and your wife belongs to the scrap book class and has been saving pictures of things she thinks she wants, ask her to keep them hidden until the architect has thought out his own solution. There is always the possibility that he may think out details that are even better than those gleaned from the "house furnishing" magazine and in the end you will have something that at least expresses unity.

And do not be too insistent upon your pet notions being carried out. The architect

may have something that is even better. And don't insist too much on the house being a copy of the one you built fourteen years ago in Englewood, New Jersey. You may be surprised in the delight which a new mental experience might give you.

* * *

THESE random notes on the near-philosophy of architecture are being written while enroute to the Sixty-third Convention of the American Institute of Architects. Passing through Southern California, Arizona, New Mexico and Texas one is given much to think about from what he sees from the car windows. Most of the buildings seen are simple enough, as is to be expected, but many are a delight to the soul. A little house built around three sides of a square (of whitewashed railroad ties, the south side being filled in with an adobe wall) down in the river bottom, as you roll into El Paso, is a joy to behold and is always looked for. The ground in and about the place is clean and bare and the patio is shaded with two cottonwood trees and graced with a Mexican bake-oven and a bevy of sun-tanned youngsters. With unconscious accommodation the train always crawls by this house giving one the opportunity to enjoy it to the full.

In the upper part of El Paso are the usual banal, inappropriate and expensive looking "residences" interspersed with an occasional one which looks as if it belonged to the locality. Billboards flaunt their unread appeals with a fury that would gladden the hearts of the Dishonour jury of the Los Angeles Architectural Club or a professional advertising agent. But the business section of the city shows a steadily developing metropolitan character which promises much for the future.

Some four hundred miles to the east of El Paso a new railroad station has been built at Del Rio. Very costly and very grand, but hot and uncomfortable in spite of its high ceilings. What an opportunity this would have been for an expansive structure, with rather flat roofs covered with large Mexican type of clay roofing tiles, broad arcades or portales, floors paved with broad flat tiles—a fountain murmuring its cooling song somewhere in a patio among the cottonwoods. When will the railroads learn that there is financial gain in these things that appeal to one's heart and comfort!

And so to the Convention where there will be much talk and exchange of opinion regarding "Art Moderne." But there will be no conclusions as to whether it is good architecture or not. Some of it is good and will stand the test of time. And some of it is not and will eventually find its way into time's inexorable waste basket along with worn out copies of the *Delineator*.

—CARLETON M. WINSLOW, A. I. A.

EDITORIAL CHAT

THE Editor is grateful for the many complimentary expressions of the Decorative Arts Number; for the somewhat daring cover design by Mr. Garren, the frank opinions of our *modern* advocates and the numerous illustrations of "modern studies" at the Decorative Arts Exhibition. Naturally in compiling such an unusual issue, there was bound to be omissions, due to lack of space and absence of suitable material for immediate use. For example, while Mr. Steilberg, in his excellent commentary on the various exhibits, referred to the painted windows by J. E. Gerrity and Hamilton Wolfe, there were no illustrations, due to absence of satisfactory photographs of these paintings. The paintings themselves were well up to the standard of the other work shown. Kem Webber's "office," too, was not illustrated although it was none the less deserving. The study, like all of Mr. Weber's work, reflected great dignity and power. We trust the artists whose work was seemingly slighted, will

bear with us, and next year we shall hope to make amends.

* * *

IT is a good sign when the large building material firms show a desire to assist the architectural profession by using a slogan like the following in their national advertising: "Consult an architect, the service is valuable." One large concern, manufacturing store fronts, is featuring the slogan in all of its advertising, local and national. It is said the words will appear forty-four million times in 1930. That's lending a hand!

* * *

LOVERS of Spanish architecture have a treat in store for them. Commencing with the July number we shall publish a Portfolio of camera sketches taken by Lothar C. Maurer of New York City while sojourning in Spain. The series will be segregated into groups and will appear six or eight pictures at a time under the titles of "Gardens," "Patios," "Windows," "Doorways," "Roofs," "Chimneys," "Farm Houses," etc. The presentation will probably cover a period of six or eight months and should prove a valuable addition to the architects' collection of Spanish work.

* * *

THE signature of William C. Hays, architect, was inadvertently omitted from the double column editorial under "The Architects' Viewpoint" in the May issue. Mr. Hays contributes to this column quarterly and his scholarly paragraphs are read with growing interest, as are the editorials by our other regular architect contributors—Carleton Winslow of Los Angeles; Harold Doty of Portland, and Chas. M. Alden of Seattle. THE ARCHITECT AND ENGINEER editorial staff was well represented at the recent A. I. A. convention in Washington and readers may look forward to some interesting comments from Messrs. Hays and Winslow, attending delegates.

* * *

THAT dynamic personage, Ole Hanson, former mayor of Seattle, and more recently founder and executive promoter of the model Spanish city—San Clemente—deserves a lot of credit for his courage and faith in what at first seemed a venturesome undertaking. But Ole has weathered the worst and San Clemente may said to be well on its way to prosperity. 'Tis a lovely little city—this San Clemente-by-the-sea, half way between Los Angeles and San Diego. We drove through the town one recent May morning and were impressed with its size, clean appearance and beautiful architecture. All the buildings —commercial and domestic—are of the Mediterranean type with white stucco walls and red tile roofs. Possibly a little too much white and red and not enough of some other color. Perhaps, as one writer argues, it will be better when the staring white is aged and mellowed by time, wind, rain and sun. Perhaps some pastel shades of blue, yellow and green, might help to relieve the monotony. Surely the experiment would do no harm and might prove just the thing to climax an otherwise perfect setting. F. W. J.

LILY POND
Sketch by Charles Hamilton Owen

1930 A. I. A. Honor Award

RESIDENCE OF HAROLD OGDEN, PASADENA, CALIFORNIA

Marston and Maybury, Architects

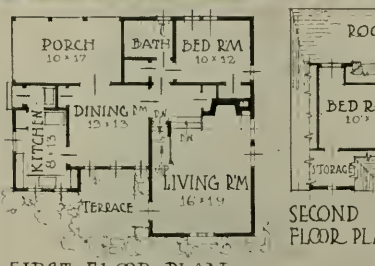
Courtesy Southwest Builder and Contractor

RESIDENCE OF HAROLD OGDEN, PASADENA, CALIFORNIA

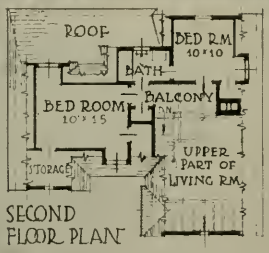
Marston and Maybury, Architects

HOME OF MR. H.L. NILES. PORTLAND, ORE.
ARTHUR TRASKER, ARCHITECT.

Material and color are used quite effectively in this house that grows with the shrubs out of the earth and seeks companionship and shelter in the clustering trees.

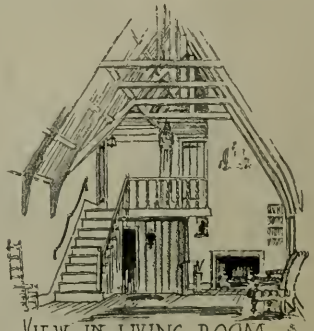


FIRST FLOOR PLAN



SECOND FLOOR PLAN

A living room raised above the general floor level, and with a high trussed ceiling, is a feature of distinction that adds materially to the feeling of comfort and luxury. . .



VIEW IN LIVING ROOM

Courtesy National Lumber Manufacturing Association

PUBLIC LIBRARY

STEEL HOUSE CONSTRUCTION

By Lee H. Miller

OVER the Alps lies Italy.

This statement was a promise of great reward for those who surmounted great difficulties. Today the largest potential market for the steel industry exists almost untouched in approximately 800,000 residences that are each year built in the United States.

For twenty years men of vision have contemplated this potential harvest and have struggled to garner it. They have been inspired by the success with which steel has displaced other materials in ships, railway cars, automobiles and many other fields, but in their individual effort to reach the residential construction field, they meet range after range of barriers.

When Hannibal found it impossible for his men as individuals to cross the torrents of the Alps, he fastened them to each other and successfully passed the impassable streams. The steel industry might profit from that example.

The United States Department of Commerce records show that in 1929 the structural steel used in the United States was approximately 3,850,000 tons, but the 800,000 residences offer a possible outlet for more than 5,000,000 tons of steel per annum. We should be able to more than double our market.

Next to clothes the housing problem of the race is the oldest and most universal. Since house construction has been an evolution of the ages, it is naturally enmeshed in an almost hopeless maze of traditions and prejudices. The construction of ships, railway cars and automobiles has been so completely subjected to engineering principles that the superior merits of steel are recognized and accepted with the result that it is the basis for such construction both in this country and abroad.

House building is very different. Nearly every person has at some time hoped to build a home; they have considered the existing materials they would prefer, certain details of arrangement and equipment which they would like, but have never thought of departing from the existing traditions of the trades that would do the work. Being uninformed as to how construction is accomplished, they depend upon persons that possess no greater knowledge of the relative merits than themselves, but whose only experience has been that of installation.

There is probably no other field where the pressure of competition affords as wide opportunities for decreasing values and standards. The result is that good honest construction is confronted with the problem of meeting the first cost of cheapened work that very shortly requires a heavy burden for maintenance.

Except for large multiple housing units and expensive single units, the architectural profession has lost contact with house construction, and the industry has passed into the hands of speculative builders or small contractors whose principal interests are low first costs and an opportunity to quickly transfer the ownership to others. Without architectural supervision the opportunities for lowering the standards is limited only by building code regulations that lack competent inspection.

City building commissioners are constantly confronted with requests for permits based upon pencil sketches made on wrapping paper or the back of wall paper, and it is difficult to control such construction.

The 1930 spring building supplement of the *Literary Digest* has the following quotation from an article by T. S. Foster:

Attempts have been made from time to time to inject new life and modern viewpoints of efficiency in the house building field. The most promising proposal has been the use of steel framework, a step which seems simple and promises to bring about a radical improvement in house construction. Yet despite this promise only a few scattered steel frame houses have been built. Why has the steel frame house failed to take after 20 years of promotion? Is it the fault of the steel frame or the methods of promotion? Where do we stand now? What are the possibilities of the future? How should these possibilities be developed?

The quotation stopping where it does, suggests an impossible barrier, but the article proposes a solution. The thesis points out that the magnitude of the problem is so vast that isolated individual efforts are so local in their influence that reserves are not sufficient to maintain morale and prevent discouragement.

The attack which broke the Hindenburg line was carried out on a grand scale by the British Army after careful preparation to follow up every advantage. In 24 hours they rained more than one million large shells costing more than twenty million dollars on this line, but the efforts would have been wasted if there had been failure to follow it up.

Mr. Foster proposes a strong national housing corporation to press the attack on a marketing front large enough to create a national public consciousness of the virtues of steel.

Mr. Foster states that the research of the United States Department of Commerce indicates that a waste of two billion dollars a years, or 53 per cent, exists in the building industry. Expressed otherwise, the public gets only 47 per cent of what they pay for. It confirms a statement, already made, that the house construction industry permits of almost unlimited scope in debasing standards and values to a point where first cost makes honest construction very difficult to market.

With the most perfect construction material that man has ever known, the steel industry holds the solution to a condition that may be properly described as a national calamity. One hundred per cent honest construction could have a first cost double the first cost of average current practice, and still be 6 per cent cheaper than current first costs. This may indicate why it is easier to finance the purchase of an automobile than it is a supposedly permanent home investment.

If the Department of Commerce figures on waste are correct, the loan companies which allow 50 per cent of the cost are actually lending about 100 per cent of the actual value. It should be possible to educate the financiers on the question of the relation of value and cost and bring about an attitude of self preservation that would result in a distinction between honest and dishonest construction.

Existing procedure in house appraisal consists in taking outside dimensions from which floor areas are found and multiplying them by an established factor which gives the cost, but not the value. Until such time as the financiers can distinguish between first cost and value, it is not reasonable to expect the home owner to do so, but once the financier is informed he will force his knowledge on the borrower.

Inasmuch as substandards of construction have been evolved through several generations they have come to be accepted as the proper standards of the material to which they are applied and there is no reason to expect that any program could successfully raise them again.

If house construction is ever to experience a high standard that will justify a more liberal consideration from financiers it must come through introduction of new materials properly designed and installed.

Steel contruction details can be standardized on a universal basis sufficiently comprehensive to enable the financier to know that it is largely free from the debased existing methods which show 53 per cent waste. He will be more willing to lend 80 per cent on a house whose value is 100 per cent of its cost than he will to lend 50 per cent on one whose value is only 47 per cent of its cost. Once a distinction is made in financing, the ultimate cost to the owner is less and the greater ease of financing makes a small increase in the initial cost less burdensome than the existing methods. On the other hand so long as the financiers apply the same rule-of-thumb to value that they do to initial cost, the latter will be the controlling factor in construction.

What has been said regarding financing, makes it necessary to consider carefully the construction features. Such efforts as have already been made to use steel in houses, have been confined almost entirely to the frame, and too often on the basis of using steel to imitate wood frames. Any proper approach to the house construction problem should embrace the careful study of every feature of a house, particularly floors.

100-STORY SKYSCRAPER

AN interesting report dealing with the height limit of office buildings has just been published by the American Institute of Steel Construction. A great deal of valuable information is given, one particularly interesting statement being that "Skyscrapers 2000 feet or 2-5 of a mile in height are structurally possible but not feasible from an economic standpoint." This study of building height has been in progress for the past two years under the direction of W. C. Clark, chief economist and vice president of S. W. Straus & Co. It was made for the Institute by independent research for the purpose of providing unbiased proof that tall buildings in congested centers are economically advisable. The report finds that buildings of 75 stories in height are not only economical, but under certain conditions will return more on the investment than a building of 50 stories or 30 stories in height.

These conclusions were based upon investigations made upon specific plans for various buildings of varied heights drawn by J. L. Kingston, architect of the staff of Warren and Wetmore. In making the studies the co-operation of numerous experts was enlisted, such as Stephen F. Voorhees of Voorhees, Gmelin and Walker; R. H. Shreve of Shreve and Lamb; David Lindquist, chief engineer of the Otis Elevator Company; S. F. Holtzman and David C. Coyle of Gunvald-Aus, consulting engineers; Levering and Garrigues and McClintic-Marshall, steel fabricators; Otto Goldschmidt, consulting engineer and expert on mechanical equipment; Hatzel and Buehler, electrical contractors; W. G. Cornell Company, plumbing, and in the building managers and rental field such experts as Lee Thompon Smith, Clarence T. Coley and William C. Demorest.

Assuming that the land value is $200 per square foot, the investigation showed that a building of 63 stories in height reaches the point of maximum economic returns. From a detail investigation of an eight-story building costing $22,193,000 to build, the net return was found to be but 4.22 per cent. In other words, the higher land value makes such a low building unprofitable. The return on a 63-story building was found to be 10.25 per cent. Where the land value is $400 a square foot, a building of 75 stories in height was found to be most economical. These conclusions were reached upon the supposition that the construction of the building would be restricted by the zoning laws of New York City applying to the midcity sections.

The report notes: "This maximum economic height is, of course, much below what might be called the maximum physical or engineering height. For all practical purposes, this physical or engineering limitation upon possible building heights has been removed by the flexibility of structural steel, terra cotta and other modern building materials and by the astounding developments in elevator and foundation engineering. Competent students of the problem estimate that if it were not for economic factors it would be possible to erect, and operate successfully, an office building approximating 2000 feet in height. The adequate elevator servicing of such a structure would require an elevator speed beyond the present legal limits as well as new safety devices and ingenious traffic arrangements (such, for instance, as doubledeck cabs and new combinations of express and local cars) which have not yet been subjected to the test of actual public trial, but which, on the basis of prolonged experiment, the foremost elevator engineers believe to be entirely practicable. The two limiting factors which make it impracticable to go beyond the approximate height of 2000 feet are (1) the enormous weight

of the elevator cables required, and (2) the capacity of the average human ear drum to withstand the vibration in an elevator cab traveling at a speed exceeding approximately 1500 feet per minute."

A study of the economic possibilities requires the careful consideration of various factors which enter into the physical construction, the rental outlook and the restriction laws surrounding skyscrapers. Among the important factors noted in the investigation were the following:

(1) Value of the land.
(2) Size and shape of plot.
(3) Legal restrictions.
(4) Efficiency of architectural design and layout.
(5) Building factors showing tendency to increase in cost as height is increased.
  (a) Structural steel.
  (b) Elevators.
  (c) Brickwork.
  (d) Plumbing and water supply.
  (e) Heating and ventilating.
  (f) Electric light and power wiring.
  (g) Total mechanical equipment.
  (h) Permanent interior partitions.
  (i) Windows and glazing.
(6) Building factors showing tendency to decrease in cost as height is increased.
  (a) Roofing.
  (b) Excavations and foundations.
  (c) Miscellaneous.
(7) Building factors showing tendency to constant cost at all heights.
  (a) Interior finish.
  (b) Concrete floors.
  (c) Exterior finish.
(8) Absorption of rentable area by elevators and other service facilities.
(9) Level of construction costs.
(10) Variations in rental value of floors at various heights.
(11) Variations in operating costs at various heights.

BATHROOMS ADVANCE TO MEET MODERN NEEDS

[Concluded from Page 97]

Almost the first thought in modernizing is for the shower, because the shower in its modern improved style was not installed in the old bathroom or was of poor construction. This form of bath is growing in popularity especially with the male contingent of the family. It is now recognized as the most hygienic and stimulating form of bathing. It has the added advantage (if space cannot be found for a separate compartment for the shower stall) of requiring little space, for it can be installed so as to play directly into the tub.

Naturally its ideal place is in a compartment all its own, for then it is the equal of another bathroom. Shower compartments can be of so many sizes and shapes that it is easily possible to find just the right size to fit almost any space being dedicated to the shower bath.

Another primary change in the bathroom from the old to the new is in line of color. Color plays an important part as the initial urge in renovating the old bathroom. Bathrooms need not now be merely sanitary and austere. Beauty may now be combined with utility. It is nine chances to five that selections of the fixtures for the new bathroom will be made in color or with small accessories in color to harmonize with the larger fixtures.

Now for the fittings. The old nickel has given way to the enduring and beautiful chromium. No more is it necessary to have unsightly peeling surfaces on fittings, for chromium has already proved its boast that it requires less care than any other material for plumbing fittings. It does not tarnish and requires little polishing other than that given by a cloth. China fittings are still in use but are easily broken and have a colder appearance with less beautiful lines.

Last of all, a spare clothes closet, a hall-end, an alcove or little tucked-in-out-of-the-way closets are full of possibilities. Such spaces are being utilized now for an extra bath, a shower, water closet or lavatory. Instead of waste spaces they are being turned into useful adjuncts to the family's comfort. Almost every home built ten to twenty years ago has one or more such spaces which are now being glorified into some form of bath or toilet equipment.

LATE INVENTIONS IN THE CONSTRUCTION FIELD

EDITOR'S NOTE—This Department by Ray Belmont Whitman, Patent Attorney of New York City, is intended to keep the reader advised upon the latest patented inventions in the fields of the architect and the engineer. Mr. Whitman offers to the readers of THE ARCHITECT AND ENGINEER *personal advice without obligation on any subject connected with patents, trade marks, designs or copyrights. All inquiries should be addressed to "Patent Editor," care of this magazine.*

PROFITS IN PATENTS

SPEAKING about the profits from simple inventions recalls the case of the Cedar Rapids, Iowa, inventor of Eskimo Pie, who is said to have realized a royalty of as much as $35,000 a week from merely putting a coating of chocolate on a piece of ice-cream. Then there was the shoe cobbler of Elyria, Ohio, with a fortune in seven figures, made in a few years, according to sworn testimony in court, from a rubber heel.

The cost of patenting and perfecting a simple invention is usually so little that any poor man can afford the risk, whereas with complicated and more technical conceptions, large sums must invariably be spent before even being able to determine if the subject-matter of the invention is of a useful or money-making character.

The Evidence of Conception

Having now conceived an idea which the inventor feels is valuable enough to go further with, he should as the next step, protect himself against any one else, either unscrupulously or accidentally, proving priority of invention and the right to a patent. One way to do this is to prepare what is known as an "evidence of conception." The inventor writes a detailed description of the complete invention in his own words, on a typewriter or with pen and ink; and makes also any necessary rough sketches to illustrate the invention (unless it be a chemical process or like invention where this is impossible). On the last page he affixes his name and the date, either in the presence of two witnesses, preferably persons outside his family, or better, before a Notary Public, who will attest his signature as of that date, and affix the notary seal. This original document should always thereafter be retained by the inventor with other valuable papers. If it has been prepared on the typewriter, which is preferable, a carbon copy should be made and used to submit the invention to his attorney later.

By this simple means, the inventor is always able to prove first conception of his invention at the date noted, and this is often of great importance, for many times others are inventing in the same field and without knowledge of their competitors' activities. Occasionally, too, where attempts are made to improperly appropriate the inventor's idea, he is able later on to substantiate his prior rights to the invention and a patent thereon. Such an instance as this last occurred to a client of the author, who won a suit on a phonograph motor patent that went up to the Supreme Court, largely upon an evidence of conception which he had written informally on the back of a dance program, but which he had been careful to properly sign, date and witness.

It is highly important also that the inventor maintain a similar record in writing, properly dated and witnessed, giving other informa-

SOME RECENT INVENTIONS

Blast Furnace, Number 17,551, Re-issued January 7th, 1930, inventor, Wallace Stuart, Cleveland, Ohio, Inventor, assigned to Inland-Stuart Linings, Inc., Delaware.

Window and Door Frame, Number 17,552, Re-issued January 7, 1930 to the inventor Fred C. Anderson, Bayport, Minn.

Weather Stripping, No. 1,742,195, Issued January 7, 1930 to the inventor Maurice E. Bosley, Chicago, Ill., assigned to The D. W. Bosley Company, Chicago, Ill.

Fire-Escape Railway Structure, No. 1,742,202, Issued January 7, 1930 to the inventor, Edward Ehlers, Montclair, N. J.

Building Structure, No. 1,742,209, Issued January 7, 1930 to the inventor, Charles F. Kuhnla, Jamaica, N. Y., assigned to August Kuhnla, Inc., New York.

Beam Hanger, No. 1,742,210, Issued January 7, 1930 to the inventor, John Lally, Great Neck, N. Y.

Column, No. 1,742,223, Issued January 7, 1930 to the inventor, Horace H. Sears, New York, N. Y.

Storm Window, No. 1,742,405, Issued January 7, 1930 to the inventor, Ovide L. Martin, Bradley, Ill.

Sliding Door, No. 1,742,408, Issued January 7, 1930 to the inventor, John P. McWilliams, Cleveland, Ohio.

Window Frame, No. 1,742,435, Issued January 7, 1930 to the inventor, William H. Cox, Ness City, Kansas.

Excavator and Method of Operating Same, No. 1,743,123, Issued January 7, 1930 to the inventor, Frank Elwood, Weiner, Ark.

Fire Box for Cast-Iron Boilers, Issued January 7, 1930 to the inventor, Harry E. Gilbert, Bridgeport, Conn.

Apparatus for Making Sand Cores, No. 1,743,473, Issued January 7, 1930, to French H. Moorehead, Boston, Mass.

Device for Filling and Sealing Cracks, No. 1,743,474, Issued January 7, 1930, to the inventor, William H. Norfolk, Brentwood Heights, Cal.

Building Wall, Material and Methods of Making Same, No. 1,743,527, Issued January 14, 1930 to the inventor, Dominick J. Calderazzo, Brooklyn, N. Y.

Window-Glass Fastener, No. 1,743,077, Issued January 14, 1930 to the inventor, Jacob Mauthe, Waterbury, Conn.

Shutter, No. 1,743,696, Issued January 14, 1930 to Henry M. Vetterlein, Philadelphia, Pa.; one-half interest assigned to Henry Penn Burke, Philadelphia, Pa.

Sheet Metal Window, No. 1,743,783, Issued January 14, 1930 to the inventor, George W. Lancaster, Richmond, Va.

Expanded Metal Lath, No. 1,743,800, Issued January 14, 1930 to the inventor, James W. Pearce, Philadelphia; assigned to North Western Expanded Metal Co., Chicago, Ill.

Nosing for Stair Treads, No. 1,743,982, Issued January 14, 1930 to the inventor, John W. Scott, New York.

Escalator, No. 1,743,995, Issued January 14, 1930 to the inventor, Gad R. Bartlett, Boston, Mass.

Steel Bleacher, No. 1,744,127, Issued January 21, 1930 to the inventors, Henry D. Oberdorfer, Champaign and Ralph R. Bramhall, Decatur, Ill.

Building Block and Method of Laying Same, No. 1,744,171, Issued January 21, 1930 to the inventor, Edward M. Lane, Charleston, S. C.

Air-Cooled Furnace Block, No. 1,744,185, Issued January 21, 1930 to the inventors, Frank H. Waite and George W. Davey, Long Island City, N. Y.

Tile and Fixture Mounting, No. 1,744,187, Issued January 21, 1930 to the inventor, William G. Webster, Chicago, Ill., assigned to Porcelain Tile Co., Chicago, Ill.

Window Construction, No. 1,744,394, Issued January 21, 1930 to the nventor, Claude A. Lewis, Houston, Texas.

Shingle and Method of Cutting the Same, No. 1,744,490, Issued January 21, 1930 to the inventor, Charles W. Mortimer, Upper Montclair, N. J.

Interior Building Construction, No. 1,744,582, Issued January 21, 1930 to the inventor, Clarence H. Collings, Cleveland Heights, Ohio.

Reenforcement for Monolithic Elements, No. 1,745,880, Issued February 4, 1930, to the inventor, Joseph Winston, New York, N. Y.

tion which also may be needed later, including: (1) the date that the invention was first disclosed to others with their names and the circumstances of the disclosures; (2) the date when the first sketches and working drawings were made—the drawings themselves to be suitably signed, dated and witnessed; (3) the date when the first operating model was made, together with information as to who made it, and the original bills for material, where obtainable; and (4) all the models themselves, made during the development of the idea, should be carefully preserved. All this data enters into a proper prosecution of what is called an "interference," in which the application for patent sometimes becomes involved.

The inventor having now established his or her "evidence of conception," may take the next step, which is:

Finding a Good Patent Attorney

There are some 12,000 or more patent attorneys registered to practice in the United States Patent Office, and of these probably 2000 get most of their income from the preparation and prosecution of patent applications, and their exploitation and litigation. These men are all professionally-trained men, and, with perhaps some rare exceptions, honest and ethical in all their dealings. However, they, like doctors, dentists, or other professional men, vary in their degree of ability or skill.

Patent Attorneys to Avoid

Some attorneys are too young and with too limited experience or education to understand fully how to properly protect a valuable invention. Others are too old to be at the height of their mental power, or not aggressive enough in combating the examiner's objections, during prosecution of the case, to obtain all the protection that the inventor is entitled to.

Some attorneys get their clients through advertising methods, and instead of conducting a professional practice, work on the "once only" plan, getting the maximum possible fees from the inventor for the minimum allowable work. Needless to say, this latter class of attorneys do their work so poorly that their patents are usually of little or no practicable value.

Other patent attorneys devote most of their time to court litigation, and very little to Patent Office practice, or the preparation and prosecution of patent applications into patents. So they have little real skill in such work, and especially in the drafting of the "claims" in patents, which is the important and really protective part of these legal documents, of which more hereafter.

Again, many patent attorneys are merely lawyers, with but little knowledge of the sciences of engineering, and so are seriously handicapped in patenting inventions, especially if they are very technical.

The ideal patent attorney is one who not only has thorough working kowledge of patent law and procedure, and especially Patent Office practice, by virtue of a proper education and long experience in the work, but who is also a graduate engineer and with a successful experience in that profession. Such a man, whose mind is trained both logically and analytically, is best able to properly represent an inventor.

If the inventor does not know of a really able attorney with a record for taking out good patents, he should try to locate some inventor who has made a monetary success from his patents, and find out whom he employed.

Building Construction, No. 1,746,440, Issued February 11, 1930, to the inventor George F. Pawling, Philadelphia,, Pa., assigned to Pawling System, Inc., Philadelphia, Pa.

Supporting Concrete Beam, No. 1,746,559, Issued February 11, 1930, to the inventor Rolf Sahlberg, New York, N. Y., assigned to The Aerocrete Corporation, New York, N. Y.

Method of Making Compound Wall Structures, No. 1,746,596, Issued February 11, 1930, to the inventor Luther Loucine Knox, Bellevue, Pa., assigned to Knox Products Company, Pittsburgh, Pa.

Reenforcing Fabric, No. 1,746,625, Issued February 11, 1930, to the inventor Arthur J. White, Pittsburgh, Pa.

Building Construction, No. 1,746,816, Issued February 11, 1930, to the inventor George F. Boes, Indianapolis, Ind.

Foundation, No. 1,746,918, Issued February 11, 1930, to the inventor Fred Elburn Webster, San Antonio, Texas.

*Copies of any of the above patents may be obtained by sending fifteen (15c) cents for each copy desired to the "Patent Editor" in care of this magazine.

QUESTIONS AND ANSWERS

Readers are urged to avail themselves of this free service for advice on the subjects of Patents, Trade Marks, Designs and Copyrights. If a personal answer is desired a stamp should be enclosed with the inquiry; otherwise the question and its answer will appear in this section in the first available issue. Address all questions to the Patent Editor, care THE ARCHITECT AND ENGINEER. Write on one side of the paper only, giving full name and address and business connection (only initials will be published if requested).

QUESTIONS AND ANSWERS

Q. (1) *When should a design patent be taken out and when should a mechanical or ordinary patent be taken out. In other words, what is the difference between these two kinds of patents?*

A. (1) A design patent is directed to an invention in which the form or appearance of the invention is important from an aesthetic or ornamental view point whereas a mechanical or ordinary type of patent is directed to the function of the invention. Whenever possible take out a mechanical patent for it is less easily avoided without infringement and therefore gives much better protection, and better prevents competition. A design patent may often be avoided by more or less simple changes in the appearance of the design without affecting the value of the new appearance.

Q. (2) *Will the Patent Office issue a patent on the same thing to more than one inventor?*

A. (2) No. The Patent Office can only issue a patent to the first inventor, although it sometimes happens that later inventors also get patents on somewhat similar things which may be modifications of or improvements over something previously patented. It is necessary for a patentee before utilizing his invention to determine by an infringement search whether there is any such other patents previously issued on part of his invention and which he would have to use in order to also use his own invention; for in that case he might infringe the claims of such prior patents and be estopped from the use of his own patent as a result.

Q. (3) *Is it possible for a poor man to make money out of a patent?*

A. (3) It certainly is; some of the greatest fortunes have been built up by men who were originally poor and who made valuable inventions and obtained strong patents on them. Large corporations fear to be drawn into infringement suits over patents and will do all they can to avoid infringing. Where, however, there is an infringement and the owner of the patent has no funds to sue the infringer, he can often make an arrangement with the Patent Attorney to conduct the litigation on a contingent fee basis.

Q. (4) *What countries grant the strongest patents?*

A. (4) The United States and Germany, since both these countries make rigid priority searches and the patents are therefore in a sense semi-adjudicated when issued. Canada, Great Britain, France and most of the other countries grant patents which are largely in the nature of registrations because the searches are not so thorough.

WITH *the* ARCHITECTS

OLYMPIC CLUB BUILDING

Preliminary estimates have been taken by John Bauer, Jr., and Bakewell & Brown, associated architects, of San Francisco, for the proposed $4,000,000. Olympic Club Building at Post and Mason Streets, San Francisco. It is hoped to start construction this summer. There will be twenty-six stories.

SAN RAFAEL HOTEL

F. H. Slocombe, 85 Cambridge Way, Piedmont, has completed plans for a two-story Class C Spanish type hotel in San Rafael for C. R. Danziger, 222 Kearny Street, San Francisco. Mr. Slocombe has also completed drawings for two residences to be built in the Eastmont Tract, Oakland.

SACRAMENTO APARTMENTS

Plans are being completed by Frederick S. Harrison for a two-story frame and stucco apartment building in Sacramento for Alice E. Harrison. The same architect is also preparing preliminary drawings for a four-story brick apartment building in Sacramento to cost $90,000.

OAKLAND APARTMENT BUILDING

Financing has been completed for the construction of a six-story steel frame and concrete apartment building at Lee and Grand Avenues, Oakland, by Harry Schuster. Willis C. Lowe is the architect. The improvements will cost $175,000.

VETERANS' MEMORIAL BUILDINGS

The Supervisors of Alameda County have definitely instructed their architect, Henry H. Meyers, to prepare plans for three new Veterans' Memorial Buildings in the County. They will be located at Livermore, Hayward and Emeryville.

SONOMA COUNTY RESIDENCE

Plans have been completed by Earle J. Osborne, Balboa Building, San Francisco for a $40,000 country house at Healdsburg for Mrs. Osborne White.

MARTINEZ HOTEL AND THEATER

A new hotel and theater is being promoted for Martinez by Earl B. Hough and associates. William H. Weeks will be the architect.

HEAVENS PORTEND DIFFICULTIES

The *Seattle Post-Intelligencer* on April 10 extended birthday congratulations to Charles H. Bebb and Sherwood D. Ford, both born in England, and explained what the heavens portend for persons born on that date as follows: "Those who were born on this date may be called upon to face some perplexing situations during the coming year. They must adopt a policy of restraint, careful deliberation and caution to avoid difficulties."

Some perplexing situations are likely to be faced by architects born on the other 364 days of the year, also.

EMERYVILLE HOTEL

Plans have been completed by W. E. Schirmer, of Oakland, for a three-story steel frame and concrete store and hotel building at San Pablo and Park Avenues, Emeryville, for Chinese interests. There will be one hundred rooms and eight stores. Mr. Schirmer has also completed plans for a chapel in Oakland for the Corpus Christi Church, Rev. F. B. Ahern, pastor.

FACTORY AND OFFICE BUILDING

The Williams Shredded Wheat Products Company will spend $100,000 in the erection of a steel frame and brick factory and office building at Belmont, San Mateo County. Plans are being prepared by Walter C. Falch, Hearst Building, San Francisco.

NEWHALL BUILDING ADDITION

Plans have been completed in the office of Lewis P. Hobart for a two-story Class A addition to the Newhall office building at 260 California Street, San Francisco. T. Ronneberg is the engineer. The improvements will cost $180,000.

OAKLAND WAREHOUSE

Charles F. B. Roeth of Oakland and Couchot & Rosewald of San Francisco, associated, have completed drawings for a $75,000 brick warehouse at Second and Harrison Streets, Oakland, for the Safeway Stores, Incorporated.

SANTA CLARA RESIDENCE

Plans have been completed by A. A. Cantin, architect of San Francisco, for a $20,000 residence in Santa Clara for M. McAllister. The architecture will be Spanish.

ARCHITECT NOT WANTED

"Retain an architect? Nothing doing. I know what I want. I don't have to hire anyone to tell me what I want. I'll tell my friend, Jones, the contractor, what to do—and I'll save the architect's fees." So saying, the idiot went past the oculist's office to buy a pair of eye glasses from his friend, Smith, who runs the local 5-and-10. Then he wondered why his eyesight was dimming and, later, why his building was obsolete before it was completed.—*Pacific Builder and Engineer.*

OPENS SEATTLE OFFICE

Welton D. Becket, who graduated in the architectural course at the University of Washington in 1927, recently established an office in the Brooklyn Building, Seattle. He spent a year after graduation doing advanced work at the Ecole des Beaux Arts at Fontainebleau, France. Later he spent two years as associate with C. Waldo Powers, architect of Los Angeles. Mr. Becket is preparing plans for a twelve-story hotel at Eighth avenue and Virginia street, Seattle, Washington.

BRONZE TABLET FOR ARCHITECTS

Wm. M. Whidden and Ion Lewis, pioneer Portland architects, will have their names perpetuated by a bronze tablet to be placed in the Portland, Oregon, city hall, as a result of activities of the Oregon Chapter. Messrs. Whidden and Lewis were architects for the city hall, built in 1895. They retired from practice about ten years ago. Mr. Whidden died in 1925. Mr. Lewis resides at the Arlington Club, Portland.

TO VISIT EUROPE

Robert F. McClelland, senior member of McClelland, Pinneh and Jones, architectural firm with offices in the Republic Building, Seattle, accompanied by Mrs. McClelland, left May 22 on a five months' study and travel tour which will include points of interest in England, France, Germany, Austria, Italy and Spain.

EIGHT-STORY BUILDING

Plans have been completed in the office of H. C. Baumann, 251 Kearny Street, San Francisco, for an eight-story apartment building to be erected at California and Joyce Streets, San Francisco, for the Marion Realty Company. The original plans for this building called for a sixteen-story structure.

PERSONAL

Joseph H. Roberts of Long Beach has moved to his own office and studio building at 501 Termino Avenue, Long Beach. For eleven years Mr. Roberts had offices in the Marine Bank Building and recently had temporary quarters in the Pacific Southwest Building, awaiting completion of his studio.

James H. Mitchell, architect, announces the opening of his office at 369 Pine Street, San Francisco. Mr. Mitchell was formerly connected with Willis Polk and Company.

Donald Francis Brode, architect, announces that he is prepared to render architectural services at 941 West 34th Street, Los Angeles.

Raymond R. Shaw and George P. Hales, A. I. A., architects and managers of construction, 1709 West Eighth Street, Los Angeles, would like catalogs, building material samples, etc., from the building trade. Mr. Hales was formerly a practicing architect in Washington, D. C. He moved to Los Angeles about ten years ago, associating himself with Parkinson and Parkinson. For the last three years he has been connected with John C. Austin and Frederick M. Ashley, architects, Los Angeles. Mr. Shaw has been, for the last fourteen years, a partner in the firm of Felchlin, Shaw and Franklin, architects, Fresno, California.

J. Kendal Masten has received a license to practice architecture. Mr. Masten is a member of the firm of Masten and Hurd, architects, San Francisco.

Gertrude Aronstein, consultant gardener, announces opening of a studio at 325 North Ellsworth Avenue, San Mateo.

Arthur J. Russell, architect, formerly a member of the Washington state examining board, and G. C. Lance, his associate, have recently moved to new quarters at 717 Jones Building, Tacoma.

Hammond W. Whitsitt, architect, has moved from the John D. Spreckels Building, to the Bank of Italy Building, San Diego.

Chas. R. Spence has opened an office for the practice of his profession at 1922 Hillhurst Avenue, Los Angeles.

Frederick Wescott, architect, has established offices at 508 Spokane Savings and Loan Building, Spokane, Washington.

Clarence Cullimore, architect of Bakersfield, accompanied by Mrs. Cullimore, recently left for a three-months' stay in Spain. Upon his return to Bakersfield Mr. Cullimore will open an office in the new Haberfelde Building, practicing independent of Edwin J. Symmes, the partnership having been

dissolved. Mr. Symmes continues the practice of architecture at the old location of the firm.

Announcement is made that S. R. Burns has retired from the firm of Hunt and Burns, architects, The practice will be continued by Sumner P. Hunt, under his own name, at the same address, seventh floor, Laughlin Building, Los Angeles, California.

CALIFORNIA ARCHITECTS HONORED

Robert D. Kohn of New York, president of the New York Building Congress, was elected president of the American Institute of Architects at the closing session of the sixthy-third convention of the Institute in Washington, D. C., May 21-23.

Edwin Bergstrom of Los Angeles was elected treasurer and Frederick H. Meyer of San Francisco was named regional director of the Sierra Nevada Division.

A "Plan of Washington Week" which will bring together in the National Capital in May, 1932, leading civic and fine arts organizations of the country to co-operate in the Federal building project as part of the national decentennial celebration of the birth of Washington was approved.

Arthur Brown, Jr., and W. C. Hays, both of San Francisco, were elected Fellows of the Institute.

STUDENTS' EXHIBIT

The entire second floor of the State Building in Exposition Park, Los Angeles, was recently devoted to a display of the work of students in the School of Architecture of the Univesity of Southern California.

In addition to building plans and designs, there were freehand drawings, mural paintings, stained glass designs, water-color sketches, statuary, bas-reliefs, sketches of interior arrangements, ornamental iron work designs, friezes, and figurines clothed by co-eds to illustrate period costumes.

NEW POMONA HOTEL

Construction of a new four-story apartment hotel at Holt and Geary Streets, in Pomona, California, is planned by the John L. Taylor Company of Glendale and Los Angeles. The proposed structure, which will cost about $225,000 to build, will contain fifty hotel rooms with baths, fourteen double apartments, two triple and twenty-five single apartments. Plans prepared by Harry W. White, architect, of Glendale, call for a Mediterranean type structure, and the hotel will be named the El Casa Del Val.

REFLECTS COAST ARCHITECTURE

McAllen, Texas, May 14, 1930.

Editor, The Architect and Engineer,
San Francisco, California.

I am enclosing herewith my check in the sum of $3.00 to cover subscription to your excellent publication for one year.

I would like to say that your magazine contributed in a wonderful manner to the enjoyment of a trip I recently made to California, in that the subjects which have been reviewed in The Architect and Engineer gave me a clue to the things I most wanted to see on the Pacific Coast.

Needless to say, I was much impressed with the fine architecture I found in such profusion on the Pacific Caost. I shall read The Architect and Engineer during the coming year with more intelligence than in past years, for I rather imagine you will be reviewing many of the fine types of architecture which I saw while there.

Yours very truly,
A. H. Woolridge, Architect.

20-STORY PORTLAND HOTEL

Preliminary plans for a 20-story $3,000,000 hotel, facing Holladay Park, Portland, Oregon, have been presented by Walker and Eisen, architects of Los Angeles. The owner is Ralph B. Lloyd. There will be setbacks at the second, seventh, sixteenth and twentieth stories. The building will contain more than 400 rooms.

ANOTHER HOLLYWOOD HOTEL

The Hollywood Ritz-Carlton Hotel Company has approved the plans of Gordon B. Kaufman of Los Angeles and Charles D. Wetmore of Warren and Wetmore of New York, for a new hotel building which is to be built on a hill overlooking Vine street, three minutes from the heart of the business district of Hollywood.

CARLETON WINSLOW MUSES

From a letter to the Editor en route to the A. I. A. convention.

"The wild flowers in the Arizona desert are lovely right now and the Mexican shacks one sees from the train are as interesting as ever. They, like their occupants, are always dignified and self respecting—quite unconscious of their shabbiness and unpretending."

AMERICAN ART TO BE FEATURED

The finest collections in art galleries and museums of the United States will be compared to European collections, and students will visit galleries and museums in and near Los Angeles, during a summer course in American art which will open at the University of Southern California, June 16, in the Trojan School of Architecture. Sculpture and mural decoration in America also will be studied.

Art structure in painting, architecture, lettering, costume, crafts, and home life will be covered in another summer school class at S. C., Dr. L. B. Rogers, dean, announces.

Modern interpretations of decorative design as applied in wrought iron, stained glass windows, ceramics, wall decorations, and textile patterns will also be studied. An applied design course will deal practically in wood block, leather tooling, batik, and other media.

Art instructors are provided a special teacher-training course in curriculum and methods in art, dealing with the content and organization of art classes and relation of aesthetics to everyday life.

Designed to develop an intelligent estimate of pictures, sculpture, architecture, furniture, pottery, and minor arts, a general course in art appreciation is also included in the 1930 summer schedule of college courses in architecture and fine arts at Southern California.

HARVEY W. CORBETT HONORED

Harvey Wiley Corbett of New York, internationally known architect, received May 14, the degree of Doctor of Laws from the University of California in recognition of his services to the fine arts in this country and abroad.

This honor to Mr. Corbett came on the date of the thirty-fifth reunion of his class, which he attended at Berkeley. The architect made the trip from New York to California by airplane.

Mr. Corbett was born in San Francisco on January 8, 1873. Following his graduation from the University of California in 1895 he attended the Ecole des Beau Arts in Paris, from which he received his degree in 1900. He returned to the United States and at once engaged in the practice of his profession, gaining wide recognition for the distinguished types of buildings which he created in various sections of the country.

Among these are the municipal group at Springfield, Mass.; the George Washington Masonic National Memorial at Alexandria, Va.; Maryland Institute, Baltimore; the Masonic Temple, Kings County Hospital group, Holy Innocents Church and St. Francis Xavier School, Brooklyn; the New York School of Applied Design for Women and the Bush Terminal office building. Bush House, in London, is considered typical of Mr. Corbett's later work. In recent years he has become active in problems of city planning in their relation to achitecture.

Mr. Corbett is a former president of the Architectural League of New York and is a Fellow of the American Institute of Architects, member of the Royal Institute of British Architects, of the Beaux Arts Architects, of the Society of Architects, London, the National Sculpture Society and the Archeological Institute of America.

BUSINESS AHEAD OF 1929

The San Francisco Bay District business of the Detroit Steel Products Company for the first quarter this year was double that for the same period in 1929, according to G. P. Richardson, Pacific Coast manager. The company reports a big demand for its "Fenmark" windows, one of the largest orders being for the new Harbor View Hospital, King County, Washington, Thomas, Granger & Thomas, architects. The contract amounted to over $60,000. Other large contracts taken recently include the Ninth Street pier for the Oakland Port Commission and a large cannery in Richmond.

BATHS WITHOUT WATER

Jail doors are yawning for several architects and engineers who built a million dollar public bath house in Moscow, Russia, and forgot to provide water connections and boilers to heat the water that ought to have been there. The fine building has been christened "the bath house without water." The baths may stand a whole year as an empty monument to "dumbbell engineers" employed by the Soviet government of Russia.—*Exchange.*

ARCHITECT BANQUETED

Walter J. Mathews, dean of East Bay architects, was tendered an anniversary dinner at the Athenian-Nile Club, Oakland, May 2, in honor of his eightieth birthday.

Mr. Mathews was an active architect for fifty years, during which time he designed many of the large buildings in Oakland.

SOCIETY and CLUB MEETINGS

NORTHERN CALIFORNIA CHAPTER

The regular monthly meeting of the Northern California Chapter was held at the Clift Hotel, San Francisco, Tuesday, April 29.

President Frederick H. Meyer presided.

After the dinner, various matters of business were presented in the following order:

A telegram from the Washington Chapter was read, requesting that this Chapter support the election of A. H. Albertson of Seattle, as first vice president of the Institute, at the annual convention.

President Meyer announced that the program for a closed competition for the first unit of the Salem Lutheran House had been approved by the competitions committee.

In connection with the previous activity of the Chapter to open principal state and Federal buildings to competition, President Meyer announced that John Austin has been appointed architect of the new State Building in Los Angeles.

The following new members were introduced by President Meyer:

Member—Gardner Dailey.

Associates—Albert Roller, Lawrence Keyser.

There being no further business, attention was directed to the program with Lester Hurd presiding as chairman.

Three very interesting talks were presented in enlargement of the general subject of professional practice.

Albert J. Evers expressed the viewpoint of the State Board of Architectural Examiners on the Education of Students in Architecture, and spoke on matters confronting the Board in determining the competence of applicants for license to practice architecture. He ably brought out the efforts of the Board to uphold the high standing of the architectural profession, to preserve and maintain it as the master of building operation, and continued with an outline of the procedure in the examination of applicants.

At the conclusion of Mr. Evers' talk, the following resolution was presented by Mr. Allen, duly seconded and unanimously carried:

RESOLVED: WHEREAS, the State Board of Architectural Examiners has recently passed a ruling that all candidates for license to practice architecture in the State of California be required to take a written examination, and

WHEREAS, the State Board of Architectural Examiners has requested the co-operation and help of the members of the Northern California Chapter, in the matter of preparing questions and setting up standards of requirements for examination, now therefore be it

RESOLVED, that the Northern California Chapter, American Institute of Architects, unanimously approves of the action of the State Board, and that its President be directed to appoint a committee to be known as

PROFESSIONAL STANDARDS COMMITTEE

for the purpose of co-operating and assisting the State Board as above set forth, and that he be further directed to appoint sub-committees under this Professional Standards Committee to work out the details of these requirements and prepare questions in accordance therewith for submission to the committee and for the approval and use by the State Board of Architectural Examiners. The work of this committee and its sub-committees to cover the entire field of the examination, including the following general divisions thereof:

(a) SUB COMMITTEE ON DESIGN, which includes Architectural History, Theory of Design, Design Problems.

(b) SUB-COMMITTEE ON ENGINEERING, which subject includes Structural Design, Strength of Materials, Mechanical Engineering.

(c) SUB-COMMITTEE ON PRACTICE which subject includes Office Administration, Specifications, Working knowledge of the laws and ordinances affecting buildings, Proper conception of the relation of Architect, Client and Contractor, and Architect to Architect, Professional Conduct, Character.

The next speaker was William I. Garren, who dwelt on Economic Reforms in the Practice of Architecture. Economic reforms were mentioned as those changes in practice, proposed but not tried and proved. The members were informed of their inability to earn income in reasonable equality with other professions, or commensurate with the income of those engaging in them. The architect's income, being fluctuating instead of stable, together with underpaid salaries to draftsmen, were stated as reasons which prevented in many instances, the accomplishment of

a higher plane of design because the worry occasioned thereby, limited the interest put into their work. Various possible solutions of this condition were suggested by the speaker.

The concluding speaker was Fred L. Berry, attorney, who on account of his work with the State Association of Architects, is placed in a position to know more of the legal phases confronting the architect, in the practice of his profession than do most attorneys. In his dwelling upon "The Architect and the Law" the various conditions placed upon the architect, the owner, and the contractor, in the eye of the law, were ably outlined. J. H. M.

SOUTHERN CALIFORNIA CHAPTER

Modern art was the theme of the May meeting of Southern California Chapter. Joseph Pijoan, professor at Pomona College, spoke at length on modern art as did also Robert M. Shipley, who dwelt on the modern trend in architecture and interior decorating in the United States and abroad.

Students of the fifth year and graduating class of the School of Architecture, University of Southern California, were guests of the Chapter and were welcomed to the meeting by President H. C. Chambers, who presided.

A resolution was adopted appointing a Professional Standards Committee to work with the State Board of Architectural Examiners in setting up the requirements and standards to be used in connection with examinations for architects' licenses. Adoption of a resolution, thanking A. S. Nibecker Jr, for his services as Secretary of the Chapter during 1928 and 1929, was also voted. Mr. Niebecker was presented with several volumes of the "History of Art," by Prof. Pijoan.

H. Roy Kelley, one of the prize winners in the small homes competition conducted by the Midwest Chapters of the American Institute of Architects and sponsored by the Monolith Portland Midwest Company, gave his impression of various places visited on his recent trip abroad.

The meeting closed with a general discussion of modern architecture, led by Sumner P. Hunt and Sumner M. Spaulding.

OREGON CHAPTER A. I. A.

At the April meeting of Oregon Chapter, A. I. A., Mr. Church spoke on professional co-operation, explaining that the Chapter executive committee had met with Dr. McCusker and Mr. Foley, who had outlined ideas to form a new organization consisting of professional organizations only, for the purpose of strengthening the position of the professional men in the community in particular and for the good of the community in general. On motion by Mr. Herzog the meeting went on record as being in sympathy with this idea.

Mr. Herzog, chairman of the legislative committee, spoke briefly about the importance of supporting the right man in the coming election; men whom the Chapter can rely upon for assistance in working out our problems.

The following resolution presented by Mr. Parker was accepted by a rising vote:

"WHEREAS, in the death of Joseph Jacobberger, the Oregon Chapter, the American Institute of Architects, has lost a most valued, respected and beloved member, therefore be it

RESOLVED, that the Oregon Chapter, the American Institute of Architects, desires to record its deep regret in the loss of Joseph Jacobberger, as a member of this body, for his unselfish willingness to assume the common burdens, his tireless efforts and valued accomplishments; as an architect, for his high ideals and unblemished professional career; as a citizen for his public-spirited devotion to the artistic progress of his community; and as a man, for the noble traits of character by which he modestly won respect and love from all who knew him; and be it further

RESOLVED, that copies of this Resolution be sent to Mrs. Jacobberger, to the Secretary of the American Institute of Architects, and to the public press."

Mr. Parker spoke about regretful elimination of the art courses at Reed College. He also stated that a movement was under way whereby lectures would be given by outside men and that the Chapter had been appealed to to give some of these lectures.

Considerable discussion of the Small House Service Bureau enlivened the meeting. Howard Doty was requested to write a resolution which is to be circulated among the members before the next regular meeting. F. A.

WASHINGTON STATE CHAPTER

At the April meeting of Washington State Chapter, held at the College Club, Seattle, the secretary read a communication from the University of Washington, Department of Architecture, calling attention to the need of funds for the Fontainbleau Scholarship. It was voted that the Chapter contribute $100 towards the Scholarship as had been done in previous years.

Prior to hearing the reports from committees, Mr. Huntington introduced Glen Morgan as one who had

« CLASSIFIED LIST of ADVERTISERS for ARCHITECT'S REFERENCE »

ALPHABETICAL LIST OF ADVERTISERS ON PAGE 162

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Federal Ornamental Iron and Bronze Co., 16th St. and San Bruno Ave., San Francisco.
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Mangrum-Holbrook Co., Inc., 1235 Mission Street, San Francisco.

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Elevator Supplies Company, Inc., Hoboken, N. J.; 186 Fifth Street, San Francisco; 1120 S. Hope Street, Los Angeles.
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ASBESTOS MATERIALS
Johns-Manville, Inc., of California, 159 Montgomery St., San Francisco. Coast Factory at Pittsburg, Calif.
Western Asbestos Magnesia Company, 25 South Park, San Francisco.

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El Rey Products Company, 1633 San Pedro St., Los Angeles; 960 Seventh St., San Francisco; 65 Columbia St., Seattle; 850 E. Taylor St., Portland.
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The Mosaic Tile Co., Zanesville, Ohio; West Coast Offices: E. K. Porter, 568-7th St., San Francisco; O. M. Bendure, 2470 Enterprise St., Los Angeles.

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Kewanee Boiler Co., 637 Minna St., San Francisco.
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W. S. Dickey Clay Mfg. Co., San Francisco and Oakland.
Port Costa Brick Works, 6th and Berry Sts., San Francisco.
The United Materials Company, 625 Market St., San Francisco.
Richmond Pressed Brick Co., 625 Market Street, San Francisco. Plant at Richmond, Calif.

BRICK AND CEMENT COATING
The Paraffine Companies, Inc., 475 Brannan St., San Francisco.

BUILDERS' HARDWARE
"Corbin" hardware, sold by Palace Hardware Company, 581 Market St., San Francisco.

BUILDING MATERIALS
The Sisalkraft Company, 205 W. Wacker Drive, Chicago, Ill.; 55 New Montgomery St., San Francisco and Hammond Lumber Co., Los Angeles.
The United Materials Company, 625 Market St., San Francisco.

BUILDING PAPERS
El Rey Products Company, 1633 N. San Pablo Street, Los Angeles; 960 Seventh Street, San Francisco; 65 Columbia Street, Seattle; 850 E. Taylor St., Portland, Ore.
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Milwaukee Corrugating Co., Milwaukee, Wis., Soule Steel Co., Rialto Bldg., San Francisco, distributors.

CEMENT
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Vogt & Davidson, Inc., 185 Stevenson St., San Francisco, and Builders Exchange, Oakland.
K. E. Parker Company, Inc., 135 South Park, San Francisco.
Barrett & Hilp, 918 Harrison St., San Francisco.
Lindgren & Swinerton, Inc., Standard Oil Building, San Francisco.
R. W. Littlefield, 337 17th St., Oakland.
Dinwiddie Construction Co., Crocker Bldg., San Francisco.
Clinton Construction Company, 923 Folsom St., San Francisco.
Monson Bros., 476 Sixth St., San Francisco.
McLaren & Co., R., Hearst Bldg., San Francisco.
Chas. D. Vezey & Sons, Sacramento and Harmon Streets, Berkeley.
Jacks & Irvine, Call Bldg., San Francisco.
Industrial Construction Company, 816 Bryant St., San Francisco.
Anderson & Ringrose, 320 Market St., San Francisco.
G. P. W. Jensen, 320 Market St., San Francisco.
G. W. Williams Co., 1404 Broadway, Burlingame, Calif.
The Dyer Construction Company, 1924 Broadway, Oakland.

CORNER BEAD
Milwaukee Corrugating Co., Milwaukee, Wis., Soule Steel Co., Rialto Bldg., San Francisco, distributors.

CORK TILE
Congoleum-Nairn, Inc., D. N. & E. Walter & Co., San Francisco, and Broadway Department Store, Los Angeles.
Van Fleet-Freear Company, 557 Howard St., San Francisco, and 420 S. Spring St., Los Angeles.

CRIBBING FOR RETAINING WALLS
Massey Concrete Products Corporation, Colton, Calif., and Spokane, Wash.

DAMP-PROOFING
The Sisalkraft Company, 205 W. Wacker Drive, Chicago, Ill.; 56 New Montgomery St., San Francisco and Hammond Lumber Co., Los Angeles.

DAMP-PROOFING AND WATER-PROOFING
Western Asbestos Magnesia Company, 25 South Park, San Francisco.
The Paraffine Companies, Inc., San Francisco, Oakland, Los Angeles, Portland and Seattle.
Gunn, Carle & Co., 444 Market St., San Francisco.

DEADENING MATERIAL
"Insulite" Western Asbestos Magnesia Co., 25 South Park, San Francisco.
The Paraffine Companies, Inc., San Francisco, Oakland, Los Angeles, Portland and Seattle.
Gunn, Carle & Co., 444 Market St., San Francisco.

DOOR CHECKS—CONCEALED
The Condor Company, 58 Sutter St., San Francisco.

DOOR CLOSERS
Norton Door Closer, sold by Norton Pacific Sales Co., 667 Howard St., San Francisco; W. H. Steel, 302 Fourth St., Los Angeles.

DOORS—FIREPROOF
Detroit Steel Products Company, 261 Kearny St., San Francisco.
Kinnear Mfg. Co., represented by Gunn, Carle & Co., 444 Market St. San Francisco.

DOORS—FREIGHT ELAVATOR
The Peelle Co., Brooklyn, N. Y., represented by Persons Dwan & Co., 534 Sixth St., San Francisco.

DOORS—HOLLOW METAL
Fire Protection Products Co., 1101 16th St., San Francisco.
Dahlstrom Metallic Door Co., Jamestown, N. Y. Coast plant, 3350 E. Slauson Ave., Los Angeles.
Forderer Cornice Works, Potrero Ave., San Francisco.
Kawneer Mfg. Co., 8th and Dwight Streets, Berkeley.

DOORS—ROLLING
Kinnear rolling steel doors, sold by Gunn, Carle & Co., 444 Market St., San Francisco.

DRAINS, FLOOR AND ROOF
M. Greenberg's Sons, 765 Folsom St., San Francisco; 122 E. Seventh St., Los Angeles; 101 N. 5th St., Portland; 1103 Post St., Seattle.

DRAIN PIPE AND FITTINGS
"Corrosiron" Acid Proof, manufactured by Pacific Foundry Co., Harrison and 18th Sts., San Francisco.

DRAPERIES AND WINDOW SHADES
D. N. & E. Walter & Co., 562 Mission St., San Francisco.

DRAWING PENCILS
A. W. Faber Company, Newark, N. J., represented by Cahen, Davis & Company, 313 Severance Bldg., Los Angeles, Calif.

DRINKING FOUNTAINS
Haws Sanitary Drinking Faucet Co., 1808 Harmon St., Berkeley, and C. F. Weber & Co., San Francisco and Los Angeles.
Standard-Pacific Plumbing Fixtures, 349 Sutter St., San Francisco; 919 W. 7th St.,

KAWNEER THE LEADERS IN MODERN STORE FRONT DESIGN

« CLASSIFIED LIST of ADVERTISERS for ARCHITECT'S REFERENCE »

ALPHABETICAL LIST OF ADVERTISERS ON PAGE 162

Los Angeles; 1301 5th Ave., Seattle. Wash.; 48 5th St., Portland, Ore.

DUMB WAITERS
Spencer Elevator Company, 166 7th St., San Francisco.
Elevator Supplies Co., Inc., Hoboken, N. J.; 186 Fifth Street, San Francisco.

ELECTRICAL CONTRACTORS
Butte Electrical Equipment Company, 2014 Folsom St., San Francisco.
Charles A. Langlais, 472 Tehama St., San Francisco.
H. C. Reed & Co., 389 Clementina St., San Francisco.
Kenyon Electric Company, 526 13th Street, Oakland.

ENGINEERS—CONSULTING, ELECTRICAL, MECHANICAL
Hunter & Hudson, 41 Sutter St., San Francisco.
Charles T. Phillips Company, Bank of Italy Bldg., San Francisco, and Roberts Bldg., Los Angeles.

ELECTRIC AIR AND WATER HEATERS
Majestic Electric Appliance Company, 590 Folsom St., San Francisco.
Sandoval Sales Company, 557 Market St., San Francisco.
Weir Electric Appliance Company, 26th and Adeline Sts., Oakland.
Wesix electric air heaters, manufactured and distributed by Weaix, Inc., 390 First St., San Francisco.

ELECTRIC REFRIGERATION
General Electric Refrigerator, George Belsey Company, Los Angeles, Distributor; Stores in Los Angeles, Pasadena, Glendale, Hollywood, Santa Monica and Monrovia; L. H. Bennett, Northern California Distributor, 2112 Broadway, Oakland; 318 Stockton St., San Francisco.

ELECTRICAL SUPPLIES and EQUIPMENT
The Frink Company, 10th Ave. at 24th St., New York; 77 O'Farrell St., San Francisco.
Drendell Electrical & Mfg. Co., 1345 Howard St., San Francisco.
Frank Adam Electric Company, 340 Fremont St., San Francisco, and 1127 Wall St., Los Angeles; general offices, St. Louis, Mo.
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., and Crocker First National Bank Bldg., San Francisco.
Sterling Bronze Co., Inc., 18 East 40th St., New York.

ELEVATOR ENTRANCE DOORS
Dahlstrom Metallic Door Company, Jamestown, N. Y., Pacific Coast plant, 3350 East Slauson Ave., Los Angeles.

ELEVATORS, PASSENGER AND FREIGHT
Kimball Elevator Co., 1579 West Jefferson Street, Los Angeles.
Otis Elevator Company, Stockton and North Point, San Francisco.
Spencer Elevator Company, 166 Seventh St., San Francisco.
Westinghouse Electric and Manufacturing Company, Crocker First National Bank Bldg., San Francisco, general offices and works, East Pittsburgh, Pa.
Consolidated Steel Corporation, 1200 N. Main St., Los Angeles.

ELEVATOR SIGNALS, DOOR EQUIPMENT
Elevator Supplies Co., Inc., Hoboken, N. J.; 186 Fifth Street, San Francisco.
The Peelle Co., Brooklyn, N. Y.; represented by Persons Dwan & Co., 534 Sixth St., San Francisco.

ENAMELS
Gold Seal Enamel—Bass-Heuter Paint Company, San Francisco, Los Angeles, Portland, Seattle.

EXIT DEVICES
Von Duprin, manufactured by Vonnegut Hardware Company, Indianapolis; sold by D. A. Pancoast Co., 605 Market St., San Francisco.

FAIENCE TILE
The Mosaic Tile Co., Zanesville, Ohio; West Coast Offices: E. K. Porter, 568-7th St., San Francisco; O. M. Bendure, 2470 Enterprise St., Los Angeles.

FENCES—WIRE AND IRON
Michel & Pfeffer Iron Works, Harrison and Tenth Sts., San Francisco.

FIRE EXTINGUISHING APPARATUS
"Lux" System, represented by Hough and Egbert, Inc., 519 Robert Dollar Bldg., San Francisco.

FIRE DETECTING APPARATUS
"Derby" and "Select" Systems; represented by Hough and Egbert, Inc., 519 Robert Dollar Bldg., San Francisco.

FIRE ESCAPES
Michel & Pfeffer Iron Works, 1415 Harrison St., San Francisco.
Palm Iron & Bridge Works, Sacramento.
Western Iron Works, 141 Beale St., San Francisco.

FIRE PROTECTION BRASS GOODS
M. Greenberg's Sons, 765 Folsom St., San Francisco; 122 E. Seventh St., Los Angeles; 101 N. 5th St., Portland; 1103 Post St., Seattle.

FIRE SPRINKLERS—AUTOMATIC
Grinnell Company of the Pacific, Fifth and Brannan Sts., San Francisco.

FIXTURES—BANK, OFFICE, STORE, ETC.
Home Manufacturing Company, 552 Brannan St., San Francisco.
Mullen Manufacturing Co., 64 Rausch St., San Francisco.
Pacific Manufacturing Company, San Francisco, Los Angeles, Oakland and Santa Clara.
The Fink & Schindler Co., 228 13th St., San Francisco.
Dependable Mfg. Co., 62 Oak Grove Avenue, San Francisco.

FLOORS—CORK, LINOLEUM, ETC.
Congoleum-Nairn, Inc., D. N. & E. Walter & Co., San Francisco, and Broadway Department Store, Los Angeles.
The Paraffine Companies, Inc., San Francisco, Oakland, Los Angeles, Portland and Seattle.

FLOORS—REDWOOD BLOCK
Redwood Block Floor Company, Bryant at 18th St., San Francisco.

FLOOR CLIPS
Bull Dog Floor Clip Co., 557 Market St., San Francisco and Hibernian Bldg., Los Angeles.

FLOORS—HARDWOOD
Inlaid Floor Company, 600 Alameda St., San Francisco.
"Perfection" Brand Oak Flooring, Arkansas Oak Flooring Co., Pine Bluff, Arkansas.
Cellized Oak Flooring, Inc., Memphis, Tenn. Represented by Geo. H. Brown Hardwood Company, Oakland.

FLOOR TILE
The Mosaic Tile Co., Zanesville, Ohio; West Coast Offices: E. K. Porter, 568-7th St., San Francisco; O. M. Bendure, 2470 Enterprise St., Los Angeles.

FREIGHT ELEVATOR DOORS
The Peelle Co., Brooklyn, N. Y., represented by Persons Dwan & Co., 534 Sixth St., San Francisco.

FURNITURE—OFFICE, SCHOOL, CHURCH, THEATER
The Fink & Schindler Co., Inc., 218-68 13th St., San Francisco.
Home Mfg. Co., 552 Brannan St., San Francisco.
Mullen Mfg. Co., 64 Rausch St., San Francisco.
C. F. Weber & Co., San Francisco, Los Angeles, and Phoenix, Ariz.

GARAGE DOOR CONTROL
Henry Schoen & Co., 557 Market St., San Francisco.

GENERAL CONTRACTORS
Spivock & Spivock, Hobart Bldg., San Francisco.
Young & Horstmeyer, 461 Market St., San Francisco.

GRAVEL AND SAND
Del Monte white sand, Del Monte Properties Co., Crocker Building, San Francisco.

GREENHOUSES
Lord & Burnham Co., Irvington, N. Y., and 208 S. La Salle St., Chicago, Ill.

GYMNASIUM EQUIPMENT—LOCKERS, ETC.
Ellery Arms Co., 583 Market St., San Francisco.

HARDWARE
Vonnegut hardware, sold by D. A. Pancoast Company, 605 Market St., San Francisco.
Palace Hardware Company, 581 Market St., San Francisco.
Sargent Hardware distributed by E. M. Hendley, 662 Mission St., San Francisco.

HARDWOOD LUMBER
G. H. Brown Hardwood Lumber Co., 47th Ave. at E. 12th St., Oakland.

HEATING—COAL FURNACE
Montague Range & Furnace Company, 376 Sixth St., San Francisco.

HEATING—ELECTRIC,
Apex Air and Water Electric Heaters, Sandoval Sales Company, 557 Market St., San Francisco.
Majestic Electric Appliance Co. (bathroom heater), 590 Folsom St., San Francisco.
Weir Electric Appliance Company, 26th and Adeline Sts., Oakland.
Wesix electric air heaters, manufactured and distributed by Wesix, Inc., 390 First St., San Francisco.

HEATING—STEAM
Warren Webster & Company, Sharon Bldg., San Francisco, and 306 Crocker St., Los Angeles.

HEATING CONTRACTORS
Gilley-Schmid Company, 198 Otis St., San Francisco.
Hateley & Hateley, Mitau Bldg., Sacramento.
W. H. Picard, 5656 College Ave., Oakland.
Luppen & Hawley, 3126-J St., Sacramento.
William F. Wilson Co., 240 Fourth St., San Francisco.
James A. Nelson, Inc., Howard and Tenth Sts., San Francisco.
Scott Company, 243 Minna St., San Francisco.
Geo. A. Schuster, 4712 Grove St., Oakland.
Mangrum-Holbrook Co., 1235 Mission St., San Francisco.

HEATING EQUIPMENT
E. A. Cornely, Inc., 1452 Bush St., San Francisco.
Illinois Engineering Co., 417 Market St., San Francisco.
Warren Webster & Company, Sharon Bldg., San Francisco, and 306 Crocker St., Los Angeles.
James A. Nelson, Inc., Howard and Tenth Sts., San Francisco.
B. F. Sturtevant Co., Monadnock Bldg., San Francisco; Los Angeles, Portland, Seattle.
C. A. Dunham Company, Dunham Bldg., 450 Ohio St., Chicago, and principal Coast cities.

HOLLOW BUILDING TILE (Burned Clay)
N. Clark & Sons, 112-116 Natoma St., San Francisco; works, West Alameda, Calif.
Gladding, McBean & Co., 660 Market St., San Francisco; 621 S. Hope St., Los Angeles; 1500 First Ave. South, Seattle; 454 Everett St., Portland; 15th and Dock Sts., Tacoma, and 22nd and Market Sts., Oakland.
W. S. Dickey Clay Mfg. Co., San Francisco and Oakland.

HOME BUILDERS
G. W. Williams Co., 1404 Broadway, Burlingame, Calif.

HOSE
The American Rubber Mfg. Co., Park Ave. and Watts St., Oakland, Calif.

HOSE RACKS AND REELS
American Rubber Mfg. Co., San Francisco, Oakland, Los Angeles and Portland, Ore.

HOSPITAL SIGNAL SYSTEMS
Chicago Signal Co., represented by Garnett Young & Co., 390 Fourth St., San Francisco.

ICE RINK CONSTRUCTION
The Dyer Construction Company, 1924 Broadway, Oakland.

INCINERATORS
The Goder, sold by M. E. Hammond, 557 Market St., San Francisco.
Kewanee Boiler Co., 637 Minna St., San Francisco.

INDUSTRIAL LIGHTING EQUIPMENT
Westinghouse Electric and Mfg. Co., East Pittsburgh, Pa., and Crocker First National Bank Bldg., San Francisco.

INSPECTIONS AND TESTS
Robert W. Hunt Co., 251 Kearny St., San Francisco.

INSULATION
"Insulex" manufactured by Pacific Portland Cement Co., Hunter-Dulin Bldg., San Francisco, and 1200 Chapman Bldg., Los Angeles.
Western Asbestos Magnesia Co., 25 South Park, San Francisco.
Gunn, Carle & Co., 444 Market St., San Francisco.
Ric-wil distributed by H. G. Sperry Co., 74 New Montgomery St., San Francisco.

INSULATED WIRE
Hazard Insulated Wire Works, Wilkes-Barre, Pa., Russ Building, San Francisco, Seattle and Los Angeles.

INTERIOR DECORATORS
S. & G. Gump Company, 246 Post St., San Francisco, and Honolulu, T. H.

KITCHEN EQUIPMENT
General Electric Refrigerator, L. H. Bennett, Rialto Building, San Francisco, and the

KAWNEER STORE FRONTS ARE DURABLE AND PRACTICAL

« CLASSIFIED LIST of ADVERTISERS for ARCHITECT'S REFERENCE »

ALPHABETICAL LIST OF ADVERTISERS ON PAGE 162

George Belsey Company, Architects Building, Los Angeles.
James A. Nelson, Inc., Howard and Tenth Sts., San Francisco.
Mangrum-Holbrook Company, 1235 Mission St., San Francisco.
McCray Refrigerator Sales Corp., Kendalville, Indiana; San Francisco office, 765 Mission Street.

LACQUERS
The Paraffine Companies, Inc., San Francisco, Los Angeles, Oakland, Portland and Seattle.
Bass-Hueter Paint Company, San Francisco, and all principal Coast cities.
"Nitrolac" manufactured by R. N. Nason & Co., 151 Potrero Ave., San Francisco.
Mangrum Holbrook Co., 1235 Mission St., San Francisco.

LANDSCAPE ARCHITECTS
Neal T. Childs, Menlo Park, California.

LATHING MATERIAL—WIRE, METAL, ETC.
Genfire Steel Co., Sheldon Bldg., San Francisco; Builders' Exchange, Oakland.
Truscon Steel Co., Sharon Building, San Francisco.
Soule Steel Company, Rialto Building, San Francisco, and Los Angeles.
"Steeltex" manufactured by National Steel Fabric Co., Pittsburgh, Pa.; 351 Bryant Street, San Francisco. 1358 Wholesale Street, Los Angeles; Seattle and Portland.

LAUNDRY MACHINERY AND EQUIPMENT
Gunn, Carle & Co., 444 Market St., S. F.

LIGHTING FIXTURES, OUTLETS, ETC.
Westinghouse Electric and Mfg. Co., Crocker First National Bank Bldg., San Francisco; general offices and works, East Pittsburgh, Pa.
The Frink Company, 369 Lexington Avenue, New York, and principal Coast cities.
Sterling Bronze Co., Inc., 18 East 40th St., New York.

LINOLEUM
The Paraffine Companies, factory in Oakland; office, 475 Brannan Street, San Francisco.
W. & J. Sloane, 216 Sutter Street, San Francisco.
Van Fleet-Freear Company, 557 Howard St., San Francisco, and 3307 Wilshire Boulevard, Los Angeles.
Bonded Floors—Sealex Linoleum and Tile manufactured by Congoleum-Nairn, Inc., D. N. & E. Walter & Co., San Francisco; Broadway Department Store, Los Angeles.

LUMBER
G. H. Brown Hardwood Company, 1044 47th Ave., Oakland.
Pacific Mfg. Co., San Francisco, Oakland, Los Angeles and Santa Clara.
Santa Fe Lumber Co., 16 California St., San Francisco.
Sunset Lumber Company, First and Oak Sts., Oakland.
E. K. Wood Lumber Co., Frederick and King Streets, Oakland.
Port Orford Cedar Products Co., Marshfield, Oregon, represented by Dant & Russell, Inc., Porter Bldg., Portland, Oregon.

MAIL CHUTES
Cutler Mail Chute Co., represented by Price Building Specialties Co., 683 Howard St., San Francisco and Continental Building Specialties Co., 1216 Hibernian Bldg., Los Angeles.

MARBLE
American Marble Company, 25 Columbus Square, San Francisco.
Clervi Marble Company and Mosaic Co., 1721 San Bruno Avenue, San Francisco.
Ray Cook Marble Company, foot of Powell St., Oakland.
Joseph Musto Sons-Keenan Co., 535 N. Point St., San Francisco.
Vermont Marble Co., Coast branches, San Francisco, Los Angeles and Tacoma.
Tompkins-Kiel Marble Company, 505 Fifth Ave., New York, also Chicago, Philadelphia and San Francisco.

MARBLE HARDWARE
M. Greenberg's Sons, 765 Folsom St., San Francisco; 122 E. Seventh St., Los Angeles; 101 N. 5th St., Portland; 1103 Post St., Seattle.

MASONRY ANCHORS
Steelform Contracting Company, Monadnock Bldg., San Francisco; Edwards & Wildey Bldg., Los Angeles.

METAL COVERED DOORS
Fire Protection Products Co., 1101 Sixteenth St., San Francisco.
Forderer Cornice Works, Potrero Ave., San Francisco.

METAL LATH (Stay-Rib)
Milwaukee Corrugating Co., Milwaukee, Wis., Soule Steel Co., Rialto Bldg., San Francisco, distributors.

MILLWORK
The Fink & Schindler Co., Inc., 218-68 13th St., San Francisco.
Pacific Mfg. Co., San Francisco, Los Angeles, Oakland and Santa Clara.
Sunset Lumber Company, First and Oak Streets, Oakland.
Lannom Bros. Mfg. Co., Fifth and Magnolia Sts., Oakland.
E. K. Wood Lumber Co., Frederick and King Streets, Oakland.

MONEL METAL
"Inco" brand, distributed on the Pacific Coast by the Pacific Foundry Company, Harrison and 18th Streets, San Francisco, and Eagle Brass Foundry, Seattle, Wash.

OBJECTS OF ART
S. & G. Gump Company, 246 Post St., San Francisco, and Honolulu, T. H.

OIL BURNERS
Rayfield Oil Burner, Coast Distributors, E. A. Cornely, Inc., 1452 Bush Street, San Francisco.
S. T. Johnson Company, 1337 Mission St., San Francisco; 940 Arlington St., Oakland; 1729 Front St., Sacramento, and 230 N. Sutter St., Stockton.
Vaughn-G. E. Witt Co., 4224-28 Hollis Street, Emeryville, Oakland.
Coen Company, 112 Market St., S. F.
California Hydro-Oil Burner, Inc., 1714 Sixteenth Street, Oakland.

ORNAMENTAL IRON AND BRONZE
Federal Ornamental Iron and Bronze Co., 16th St. and San Bruno Ave., San Francisco.
Michel & Pfeffer Iron Works, 1415 Harrison St., San Francisco.
Palm Iron and Bridge Works, Sacramento.

PAINTING, DECORATING, ETC.
The Tormey Co., 563 Fulton St., San Francisco.
A. Quandt & Sons, 374 Guerrero Street, San Francisco.
D. Zelinsky & Sons, Inc., 165 Grove St., San Francisco.

PAINTS, OILS, ETC.
The Paraffine Companies, Inc., San Francisco, Los Angeles, Oakland, Portland and Seattle.
Bass-Hueter Paint Company, San Francisco, Los Angeles, Portland, Seattle.
R. N. Nason & Co., 151 Potrero Ave., San Francisco.

PANEL BOARDS
Frank Adam Electric Company, 340 Fremont St., San Francisco, and 1127 Wall Street, Los Angeles; general offices, St. Louis, Mo.
Westinghouse Elec. and Mfg. Co., Crocker First National Bank Bldg., San Francisco; general offices and works, East Pittsburgh, Pa.

PANIC EXIT DEVICES
Von Duprin, manufactured by Vonnegut Hardware Company, Indianapolis; sold by D. A. Pancoast Co., 605 Market Street, San Francisco.

PARTITIONS—MOVABLE OFFICE
Dahlstrom Metallic Door Company, Jamestown, N. Y., Coast plant, 3350 E. Slauson Ave., Los Angeles.
Pacific Mfg. Co., Monadnock Building, San Francisco; factory at Santa Clara.

PENCILS AND ERASERS
A. W. Faber Company, Newark, N. J., represented by Cahen, Davis & Company, 313 Severance Bldg., Los Angeles, Calif.

PIPE—STEEL
Bethlehem Steel Co., Bethlehem, Pa.; Pacific Coast Distributor: Pacific Coast Steel Corp., Matson Bldg., San Francisco.
Pacific Coast Steel Corporation, Matson Bldg., San Francisco.

PIPE—WROUGHT IRON
Reading Iron Co., Reading, Pa., and Balbos Bldg., San Francisco.

PLASTER
"Empire," manufactured by Pacific Portland Cement Co., Hunter-Dulin Building, San Francisco, Portland, San Jose and Los Angeles.

PLASTER BASE
"Celotex," Western Asbestos Magnesia Co., 25 South Park, San Francisco.

PLASTERING CONTRACTORS
A. Knowles, Call Bldg., San Francisco.
MacGruer & Company, 266 Tehama Street, San Francisco, and Pacific Mutual Bldg., Los Angeles.

PLUMBING CONTRACTORS
Gilley-Schmid Company, 198 Otis St., San Francisco.
Hateley & Hateley, 1710 Tenth St., Sacramento.
Luppen & Hawley, 906 7th St., Sacramento.
Scott Co., Inc., 243 Minna St., S. F.
Wm. F. Wilson Co., 248 Fourth Street, San Francisco.
Geo. A. Schuster, 4712 Grove St., Oakland.
W. H. Picard, 5656 College Ave., Oakland.

PLUMBING SUPPLY HOUSES
Standard Pacific Fixtures, 349 Sutter St., San Francisco.
Tay-Holbrook, Inc., 165 8th Street, San Francisco.
Clarence Drucker, manufacturers' representative, 307 Minna St., San Francisco.
Walworth Company, Boston, Mass., San Francisco office, 235 Second Street.

PLYWOOD
Port Orford Cedar Products Co., Marshfield, Oregon, represented by Dant & Russell, Inc., Porter Bldg., Portland, Oregon.

PRESSURE REGULATORS
Vaughn-G. E. Witt Co., 4224-28 Hollis Street, Emeryville, Oakland.

PUMPING MACHINERY
Simonds Machinery Co., 816 Folsom Street, San Francisco; 5220 East 4th Street, Los Angeles.

PUMPS—HAND OR POWER
Ocean Shore Iron Works, 558 Eighth St., San Francisco.
S. F. Bowser & Co., Inc., 425 Brannan St., San Francisco.

REFRIGERATORS
"General Electric," sold by the George Belsey Company, Architects Building, Los Angeles; L. H. Bennett, Rialto Bldg., San Francisco.
McCray Refrigerator Sales Corp., Kendalville, Indiana; San Francisco office, 765 Mission Street.
Dependable Mfg. Co., 62 Oak Grove Avenue, San Francisco.

REINFORCING STEEL
Soule Steel Company, Inc., Rialto Bldg., San Francisco, and Los Angeles.
Gunn, Carle & Co., Inc., 444 Market St., San Francisco.
United Alloy Steel Corporation, Canton, Ohio; Western Sales Office, Santa Fe Bldg., San Francisco.
Pacific Coast Steel Corporation, Matson Bldg., San Francisco.

ROOF CONTRACTORS
General Roofing Company, Beach and Halleck Streets, Oakland.

ROOF MATERIALS
El Rey Products Co., 1633 San Pablo St., Los Angeles; 960 7th St., San Francisco; 65 Columbia St., Seattle; 850 E. Taylor St., Portland.
Kraftile Company, office and factory at Niles; show room, 55 New Montgomery Street, San Francisco.
"Malthoid" and "Ruberoid," also "Pabco" 10 and 20 year roofs, manufactured by the Paraffine Companies, Inc., San Francisco, Los Angeles, Oakland, Portland and Seattle.
Gladding, McBean & Co., 660 Market St., San Francisco; 621 S. Hope St., Los Angeles; 1500 First Ave. South, Seattle; 454 Everett St., Portland; 15th and Dock Sts., Tacoma, and 22nd and Market Sts., Oakland.
N. Clark & Sons, 112-116 Natoma Street, San Francisco; works, West Alameda, California.
W. S. Dickey Clay Mfg. Co., Rialto Bldg., San Francisco.
Johns-Manville Corporation of California, 159 New Montgomery St., San Francisco.
The United Materials Company, 625 Market St., San Francisco.
Western Asbestos Magnesia Company, 25 South Park, San Francisco.
Pioneer Paper Co., 5500 South Alameda, Los Angeles; Hearst Bldg., San Francisco; offices in Portland, Seattle, Salt Lake City, Spokane and Denver.
General Roofing Company, Beach and Halleck Streets, Oakland.

ROOF MATERIALS (Two-Drain Metal Roofing & Copper Tile)
Milwaukee Corrugating Co., Milwaukee, Wis.,

« CLASSIFIED LIST of ADVERTISERS for ARCHITECT'S REFERENCE »

ALPHABETICAL LIST OF ADVERTISERS ON PAGE 162

Soule Steel Co., Rialto Bldg., San Francisco, distributors.

RUGS AND CARPETS—IMPORTED
Kent-Costikyan, Inc., 485 Fifth Ave., New York City, with offices at 442 Post St., San Francisco and 816 South Figueroa St., Los Angeles.
W. & J. Sloane, 216 Sutter St., San Francisco.

SAFETY TREADS
Price-Teltz Company, 683 Howard St., S. F.
Gunn, Carle & Co., 444 Market St., S. F.

SASH CHAINS
American Chain Company, Inc., Bridgeport, Conn., and 425 Second St., San Francisco.
The Smith & Egge Mfg. Co., P. O. Box 1040, Bridgeport, Conn.; 606 American Bank Bldg., Los Angeles.

SCAFFOLDING FOR CONTRACTORS
Steelform Contracting Company, Monadnock Bldg., San Francisco; Edwards & Wildey Bldg., Los Angeles.

SEATING—SCHOOL, THEATER, CHURCH
Home Manufacturing Company, Inc., 552 Brannan St., San Francisco.
C. F. Weber & Co., San Francisco, Los Angeles, Phoenix, Ariz.; Reno, Nevada.

SELF-RELEASING FIRE EXIT DEVICES
Von Duprin, manufactured by Vonnegut Hardware Company, Indianapolis; sold by D. A. Pancoast Co., 605 Market St., S. F.

SHEATHING
The Sisalkraft Company, 205 W. Wacker Drive, Chicago, Ill.; 55 New Montgomery St., San Francisco and Hammond Lumber Co., Los Angeles.

SHEATHING AND SOUND DEADENING
Western Asbestos Magnesia Co., 25 South Park, San Francisco.

SHEET METAL WORKS
Forderer Cornice Works, Potrero Ave., San Francisco.

SHOW CASES
Home Manufacturing Company, Inc., 552 Brannan St., San Francisco.
Mullen Manufacturing Company, 64 Rausch St., San Francisco.

SHOWER DOORS—GLASS SHIELDS
M. Greenberg's Sons, 765 Folsom St., San Francisco; 122 E. Seventh St., Los Angeles; 101 N. 5th St., Portland; 1103 Post St., Seattle.

SOUND ABSORBING TREATMENT
Johns-Manville Corporation, 159 New Montgomery St., San Francisco.

SIGNALING & PROTECTIVE SYSTEMS
Garnett, Young & Co., 390 Fourth St., San Francisco.

SLUDGE BED GLASS-OVERS
Lord & Burnham Co., Irvington, N. Y., and 208 So. La Salle St., Chicago, Ill.

STANDPIPE SIAMESE AND VALVES
M. Greenberg's Sons, 765 Folsom St., San Francisco; 122 E. Seventh St., Los Angeles; 101 N. 5th St., Portland; 1103 Post St., Seattle.

STEEL FABRIC
Soule Steel Company, Rialto Bldg., San Francisco, and Los Angeles.
National Steel Fabric Co., Pittsburgh, Pa.; 351 Bryant Street, San Francisco; 1358 Wholesale Street, Los Angeles; Seattle and Portland.

STEEL FORMS
Steelform Contracting Company, Monadnock Bldg., San Francisco; Edwards & Wildey Bldg., Los Angelea.

STEEL TANKS
Ocean Shore Iron Works, 55 Eighth St., San Francisco.

STEEL LUMBER
Genfire Steel Co., Sheldon Bldg., San Francisco; Builders' Exchange, Oakland.

STEEL SASH
Bayley-Springfield solid steel sash, sold by Gunn, Carle & Co., 444 Market St., San Francisco.
"Fenestra" Solid Steel Sash, manufactured by Detroit Steel Products Co., factory sales office, 626 Hunter-Dulin Bldg., San Francisco.
Michel & Pfeffer Iron Works, 1415 Harrison St., San Francisco.
W. S. Lea, 653 South Clarence St., Los Angeles.

STEEL—STRUCTURAL
Bethlehem Steel Co., Bethlehem, Pa.; Pacific Coast Distributor: Pacific Coast Steel Corp., Matson Bldg., San Francisco.
Golden Gate Iron Works, 1541 Howard St., San Francisco.
Judson Pacific Company, C. F. Weber Bldg., Mission and Second Sts., San Francisco, shops, San Francisco and Oakland.
McClintic-Marshall Company, 2050 Bryant Street, San Francisco.
Herrick Iron Works, 18th and Campbell Sts., Oakland.
Pacific Coast Eng. Co., foot 14th St., Oakland.
Palm Iron & Bridge Works, Sacramento.
Schrader Iron Works, Inc., 1247 Harrison St., San Francisco.
Western Iron Works, 141 Beale St., S. F.
Consolidated Steel Corporation, 1200 N. Main St., Los Angeles.

STORE FRONTS
Kawneer Mfg. Co., 8th and Dwight Streets, Berkeley.

STREET LIGHTING EQUIPMENT
Westinghouse Electric and Mfg. Co., East Pittsburgh, Pa., and Crocker First National Bank Bldg., San Francisco.

STRUCTURAL STEEL SHAPES
Bethlehem Steel Co., Bethlehem, Pa.; Pacific Coast Distributor: Pacific Coast Steel Corp., Matson Bldg., San Francisco.
Pacific Coast Steel Corporation, Matson Bldg., San Francisco.

SUN TAN ROOMS
Lord & Burnham Co., Irvington, N. Y., and 208 So. La Salle St., Chicago, Ill.

SWIMMING POOL GLASS ENCLOSURES
Lord & Burnham Co., Irvington, N. Y., and 208 So. La Salle St., Chicago, Ill.

SWITCHES AND SWITCHBOARDS
Westinghouse Elec. & Mfg. Co., Crocker First Nat. Bank Bldg., San Francisco; general offices and works East Pittsburgh, Pa.

TELEPHONE SERVICE ARRANGEMENTS
All Bell Telephone Companies. Apply nearest Business Office, or American Telephone and Telegraph Company, 195 Broadway, New York.

THERMOSTATS FOR HEAT REGULATION
Johnson Service Company, Milwaukee, Wis.; Rialto Building, San Francisco.

TERRA COTTA
N. Clark & Sons, 116 Natoma St., S. F.
National Terra Cotta Society, 230 Park Avenue, New York, N. Y.
Gladding-McBean & Co., San Francisco, Los Angeles, Portland and Seattle.

TILE—RUBBER, CLAY, CORK, ETC.
Rossman Corporation of California, 49 Geary Street, San Francisco and Architects' Bldg., Los Angeles.
N. Clark & Sons, 112-116 Natoma Street, San Francisco; works, West Alameda, Cal.
Congoleum-Nairn, Inc., D. N. & E. Walter & Co., San Francisco, and Broadway Department Store, Los Angeles.
Gladding, McBean & Co., 660 Market St., San Francisco; 621 S. Hope St., Los Angeles; 1500 First Ave. South, Seattle; 454 Everett St., Portland; 15th and Dock Sts., Tacoma, and 22nd and Market Sts., Oakland.
Kraftile Company, factory at Nilee; 55 New Montgomery Street, San Francisco.
Mangrum-Holbrook, Inc., 1235 Mission St., San Francisco.
United States Rubber Co., 300 Second St., San Francisco, and 923 Los Angeles St., Los Angeles, Calif.
Armstrong Cork Tile, sold by Van Fleet-Freear Co., 557 Howard Street, San Francisco; 3307 Wilshire Boulevard, Los Angeles.
The Mosaic Tile Co., Zanesville, Ohio; West Coast offices: E. K. Porter, 568 - 7th St., San Francisco; O. M. Bendure, 2470 Enterprise St., Los Angeles.
Mangrum-Holbrook Co., 1235 Mission St., San Francisco.

UNDERGROUND CONDUIT
Ric-wil distributed by H. G. Sperry Co., 74 New Montgomery St., San Francisco.

UNDERFLOOR DUCT SYSTEM
Johns-Manville Corporation, 159 New Montgomery St., San Francisco.

VACUUM HEATING SYSTEM
C. A. Dunham Company, Dunham Bldg., 450 Ohio St., Chicago, and principal Coast cities.

VALVES—PIPES AND FITTINGS
Clarence Drucker, Manufacturers' Agent, 307 Minna Street, San Francisco.
Grinnell Co., Fifth and Brannan Sts., S. F.
Sloan Valve Company, Chicago; E. C. Whalen, 954 Western Pacific Bldg., Los Angeles; W. J. Driscoll, 482 Monadnock Bldg., San Francisco; E. C. Fallein, U. S. National Bank Bldg., Denver; S. D. Cochran, L. C. Smith Bldg., Seattle, Wash.

VARNISHES
Bass-Hueter Paint Company, San Francisco, Los Angeles, Portland, Seattle.
The Paraffine Companies, Inc., San Francisco, Los Angeles, Portland and Seattle.
R. N. Nason & Co., 151 Potrero Ave., S. F.

VENETIAN BLINDS
C. F. Weber & Company, 601 Mission St., San Francisco.

VENTILATING EQUIPMENT
B. F. Sturtevant Co., Monadnock Bldg., San Francisco; Los Angeles, Portland and Seattle.

VENTILATORS
"The Panelouvre," sold by M. E. Hammond, Pacific Bldg., San Francisco.

VITREOUS CHINAWARE
Standard - Pacific Plumbing Fixtures, 349 Sutter St., San Francisco; 919 W. Seventh St., Los Angeles; 1301 Fifth Ave., Seattle Wash.; 48 Fifth St., Portland, Ore.

WATER HEATERS—GAS
Pittsburg Water Heater Company, (gas), 478 Sutter Street, San Francisco.

WALL BEDS, SEATS, ETC. (See Beds),

WATER COOLERS
General Electric Refrigerator, L. H. Bennett, Rialto Building, San Francisco, and the George Belsey Company, Architects Building, Los Angeles.

WALL BEDS
Marshall & Stearns, Phelan Building, S. F.
Rip Van Winkle Wall Bed Co., 51 Second St., San Francisco, and 792 22nd St., Oakland.

WALL TILE
The Mosaic Tile Co., Zanesville, Ohio; West Coast Offices: E. K. Porter, 568-7th St., San Francisco; O. M. Bendure, 2470 Enterprise St., Los Angeles.

WATERPROOFING
Johns-Manville Corporation, 159 New Montgomery St., San Francisco.
The Paraffine Companies, Inc., San Francisco, Los Angeles, Oakland, Portland, Seattle.
Gunn, Carle & Co., 444 Market St., San Francisco.
The Sisalkraft Company, 205 W. Wacker Drive, Chicago, Ill.; 55 New Montgomery St., San Francisco and Hammond Lumber Co., Los Angeles.

WATER SUPPLY SYSTEMS
Kewanee Water Supply System — Simonds Machinery Co., agents, 816 Folsom St., San Francisco; 520 East Fourth Street, Los Angeles.

WINDOW SHADES
W. & J. Sloane, 216 Sutter St., S. F.
D. N. & E. Walter & Co., 562 Mission St., San Francisco.

WINDOWS—STEEL, REVERSIBLE, ETC.
Campbell and Voigtmann Metal Windows, distributed by Fire Protection Products Company, 1101 Sixteenth St., S. F.
Crittall Casement Window Company, Detroit, Mich. Badt-Falk & Co., 74 Montgomery Street, San Francisco. F. T. Crowe & Co., 216 Walker Bldg., Seattle. R. H. Hoskins, 510 Hyde Bldg., Spokane. McCracken-Ripley Co., 61 Albina Avenue, Portland. F. T. Crowe & Co., 1177 Dock Street, Tacoma, Wash. Crittall Casement Window Co., 504 Union Insurance Bldg., Los Angeles.
Hauser Window Co., 1362 Harrison St., S. F.
Detroit Steel Products Co., Detroit, Mich.; Hunter-Dulin Building, San Francisco and Pershing Square Building, Los Angeles.
W. C. Lea, 653 South Clarence St., L. A.

WINDOWS, BASEMENT
Milwaukee Corrugating Co., Milwaukee, Wis., Soule Steel Co., Rialto Bldg., San Francisco, distributors.

WIRING SYSTEM
Westinghouse Electric and Manufacturing Company, Crocker First National Bank Bldg., San Francisco; general offices and works, East Pittsburgh, Pa.

SEE THE NEW MODERNISTIC KAWNEER STORE FRONT

been an architect, musician, contractor and finally again an architect, Mr. Morgan having consented to give some violin selections with Mr. Feringer at the piano.

In the absence of Mr. Aitken, the chairman of the committee on public information, Mr. Alden reported for the committee its approval of the recommendations made by the previous committee at the annual meeting. With specific reference to these recommendations it was voted that the committee on domestic architecture co-operate with the Better Homes in America, the Architects' Small House Service Bureau and the Home Modernizing Bureau. Further contact was suggested by Mr. Vogel with the construction industry and with the craftsmen and these were referred to appropriate committees.

Mr. Gove, in reporting for the education committee, asked for recommendations of books for draftsmen's use and called upon Mr. Wynkoop, the President of the Poché Club, to speak for this organization of draftsmen.

Mr. Erskine, President of the Seattle Real Estate Board, was introduced and after making some remarks complimentary to architecture and architects, explained a resolution passed by the Real Estate Board relative to the award of certificates of honor for notable buildings. This resolution, a copy of which was distributed, read as follows:

"Resolved, that the Seattle Real Estate Board announce its purpose to award certificates of honor to be given at the close of the year of 1930 to the owners of the best Seattle buildings completed that year, as follows:

1. For the best business building in the downtown area.
2. For the best business building in a business subcenter.
3. For the best industrial building.
4. For the best single detached residence.
5. For the best apartment house.
6. For the best single detached residence costing more than $7000 exclusive of ground, but including all other expenses of construction and development.

In awarding these certificates, beauty, suitability and true economy shall be considered.

The Seattle Real Estate Board will select competent disinterested judges to make these awards. Photographs of all structures entered in this competition shall be submitted with entry. There shall be no fee for entering the competition.

It was voted that the Chapter commend the Real Estate Board for this endeavor and offer the assistance of the Chapter.

E. S. Goodwin, President of the Seattle City Planning Commission, recently elected an Honorary Associate member of the Chapter, was introduced and responded in a graceful manner, expressing his appreciation of the honor conferred upon him. He spoke appreciatively of the Chapter's interest in the city planning and of the support it had given to the Seattle Commission. A city needed planning, he said, as did a building, and the architect, being conversant with planning, was particularly fitted to appreciate its value in directing the growth of a city.

The President then turned the meeting over to the chairman of the program committee, Mr. Stoddard, who introduced as the next speaker, J. H. Stevenson, whose subject was "Steel Construction."

Beginning with the early use of wrought iron rolled beams in building construction, Mr. Stevenson sketched in an entertaining manner the development of the steel frame building. The time arrived in economic development when conditions made necessary construction of buildings more than five stories in height. This brought the introduction of the passenger elevator. The passenger elevator, in turn, became responsible for higher buildings. Pioneering in the field of steel construction, numerous buildings were constructed with cast iron columns with steel floor beams, still retaining exterior masonry bearing walls. Later there developed the cast iron front from which it was but a step to the use of steel columns and true skeleton construction. Mr. Stevenson mentioned several early projects in Chicago, designed by such men as W. L. B. Jenney, D. H. Burnham, and Holabird & Roche. In recent years the manufacturers of structural steel have gone into research work, increasing the efficiency of steel construction and developing numerous new sections of great economy.

These latter are the larger girder beams now rolled, the H-section columns, the rolled steel joists and junior beams. In conclusion Mr. Stevenson spoke of the proposed new types of steel construction, involving electric welding, and made some comments on the proposed battleship type floor now being extensively advocated.

Mr. Hadley, of the Cement Association, was then introduced to speak on "Reinforced Concrete." This method of construction, Mr. Hadley said, originated in 1877 and became generally recognized in the construction of a warehouse by Mr. Ransome in 1885. Concrete, said Mr. Hadley, is distinctive in that it is the only structural building material actually manufactured on the job. Its distinctive feature is the fact that it is placed in the work in a plastic condition and subsequently hardens. As a plastic mass it is capable of assuming any desired form at low cost and the ornamental surface treatment is readily achieved without great expense.

Steel and concrete have the same expansion and contraction under the action of heat. This fact has

made it possible to use it in combination without setting up stress between the two materials. The new conception of concrete is that it is a paste composed of cement and water, which is increased in bulk by the addition of aggregates. Proper grading of the aggregate controls the amount of inert materials which may be added to the cement paste and consequently the economy of the resulting construction.

Mr. Hadley concluded his instructive talk with some interesting lantern slides.

COMMONWEALTH CLUB

The May 8th meeting of the Section on Architecture, Commonwealth Club, San Francisco, was addressed by Albert Evers, architect, on "A Fine Arts Commission for San Francisco." Three separate aspects were outlined; (a) a Board of Architectural Review; (b) a complete Fine Arts Commission; and (c) the question of handling of municipal architecture. He gave a general idea of what a fine arts commission is, why it is needed, its effect upon the work of other cities and the means of getting such a commission for San Francisco.

Art commissions in different cities vary in their scope of authority and Mr. Ever's point that a commission have supervisal powers over all works of architecture, sculpture, etc., met with the general approval of the section.

The method of handling municipal architecture in San Francisco is unsatisfactory. Political friends get a good part of public work and often achieve inferior results. A city office or bureau also has its disadvantages. A fine arts commission should have final authority over all city work.

For a time San Francisco was fortunate in having a good architect in the nominal position of city architect. Since his removal there has been a general let-down in quality of public work.

There are two ways of getting a fine arts commission. One by a supervisors' charter amendment, the other by petition and ballot. The expense of getting required signatures for the latter is considerable. Mr. Dixon suggested that the stores of San Francisco might be brought to realize the advantages of an art commission and be willing to aid in getting signatures to a petition; perhaps by providing desk space for volunteer workers of improvement clubs and other organizations. It was suggested that later in the progress of study of a fine arts commission that members of other clubs be invited to attend the Commonwealth Club Section meetings. E. E. W.

ARCHITECTS VISIT CEMENT PLANT

More than thirty members of the Northern California Chapter, A. I. A., and the State Association of California Architects, journeyed, on May 2, 3 and 4 to the Calaveras Cement Company's plant near San Andreas, in the Mother Lode Country.

Some of the members took advantage of the opening of the fishing season and caught the limit of trout. Others went later in the week and inspected the Pardee Dam (recently completely at a cost of approximately $7,000,000) and also the Stockton, or Calaveras Dam, now being built by the city of Stockton, and about 50% completed. The architects were able to witness a completely filled reservoir back of the Pardee Dam, the water going over the spillway for the first time a day or two following their trip.

All the visitors were taken through the Calaveras Cement Company's modern wet process plant, and appeared to be very much interested. After the inspection the architects of the two organizations were guests of the company at the famous and historical Kentucky House.

The following architects and guests made the trip: Edwin L. Snyder and wife, Chas. J. Rousseau, Will H. Toepke, G. M. Williams, Joseph Darcy, Earle Bertz, Morris Bruce, Charles Maury, Albert Winter, Ernest E. Weihe, J. S. Gould, E. Frick, W. E. Baumberger R. G. DeLappe, Milo S. Farwell, Ralph Wyckoff, H. E. Thompson, A. C. Hanifin, Geo. Cantrell, R. Nordin, L. A. Kruse, Harvey Harris, Chas. E. Rogers, W. I. Garren, Thos. J. Kent, A. T. Haas, J. K. Branner, A. J. Fabre, E. H. Hildebrand, Victor Galbraith and wife, L. G. Hendy, wife and friend, W. G. Corlett, C. Whitton. The cement company was represented by Phil Taylor, Kenneth Vaughan and J. E. Jellick as hosts.

BEAUX ARTS DINNER

The annual dinner of the American Architects of the Ecole des Beaux Arts in Paris, welcoming the new students to the Ecole, was held recently at the Restaurant de l' Odeon, in that city.

Speakers referred particularly to the fine record made by Americans at the Ecole des Beaux Arts, and encouraged the younger students to carry on the tradition.

Seven Ateliers were represented by the following: Caleb Hornbostel of Pittsburg, Thomas Daniel of Washington, Paul A. Ryan of San Francisco, Harry Seckles of New York, Thomas H. Lockroft of Washington, Isidore Silverman of Minneapolis, Joseph Murphy of Kansas City, Winston Elting of Chicago, Louis Evan of New York, Charles O'Neil of Hollywood, Arthur Richardson of Boston, Charles West of Chicago, George Mabry of Paris and John Maignon of Paris.

S. F. ARCHITECTURAL CLUB

The May meeting of the San Francisco Architectural Club was well attended and there were present many familiar faces not seen in quite a while. Committee reports and treasurer's report all showed progress.

Two new members, William Lee Olds and Albert Kahl, were elected. C. J. Sly announced that his engineering class was at an end but that due to compulsory written State Board examinations for architectual certificates, there was such a demand for a new class, that he would start a third course in engineering for architects.

This being "Fun Night," Ed Counter, on behalf of 'the committee,' presented the vice president, Ira Springer, with a beautiful rubber fish about fifteen inches long, and covered with scales (not architectural). The committee and Mr. Counter in particular, were duly thanked for their gift.

* * *

The fourth annual picnic of the club was a huge success. It was held at Mitchell's Canyon in a park loaned by the Henry Cowell Lime and Cement Company, and what a beautiful park it is! It lays at the foot of Mount Diablo, directly below the beacon, in a canyon with a little brook running between its green slopes. And the day! It was perfect!

Through an accident, one of the signs was blown to point in the wrong direction, but everyone finally reached the park. After all had eaten their fill, the festivities began.

The baseball game between the Atelier and Engineering class was halted in the fifth inning for fear of continuing on until the next day. The score was 24 to 1 in favor of the Atelier which has won for the third consecutive time. Captain Sly, of the Engineer's team, promises to have clothes baskets for all those who play on his team next year.

The golf cup was hotly contested with the non-golfers coming out on top. Al Johnson and Ira Springer tied for first and on the play-off were again tied, but on the third day Al held out the best and gets his name engraved on the cup.

The bathing girls, (?) consisting of Ed Counter and his cohorts, made a very respectable showing. The bathing suits, from the vintage of 1900 or thereabouts, fit their handsome figures as though they were made for someone else, but there was no doubt that Ed, himself, who was in better "form" than the others, carried off the honors.

There were many bathers who were brave enough to enter the plunge.

* * *

When it comes to winning competitions the San Francisco Architectural Club has a record of which it may feel proud. Mario Ciampi, Massier of the Atelier, has won the Harvard scholarship for 1930. This is the ninth scholarship won by the club members in ten years. Where is the club that can even tie that record? Mario's accomplishment is to be noted because there were more competitors this year than on any previous occasion. We venture to predict he will take the Paris prize before many years have elapsed. Following is the list of Harvard scholarships won by members of the San Francisco Architectural Club:

1920—L. A. Kruse.
1924—G. W. Travis.
1925—G. W. Travis.
1926—O. M. Bullock.
1926—R. J. Blas.
1927—R. J. Blas.
1927—T. A. Vierra.
1928—H. T. Anderson.
1930—M. J. Ciampi.

CONVENTION FOR SAN FRANCISCO

An invitation from Northern California Chapter to hold the 1931 national convention in San Francisco was accepted by the executive board of the Associated General Contractors of America at its meeting in Washington, D. C. Milwaukee Chapter, which had asked for the convention, withdrew its invitation in favor of San Francisco. The convention will be held during the last week in January.

Following up its efforts to secure the elimination of preferential prices for cement given to public bodies and public utilities, a conference was arranged at which a permanent joint committee was appointed, consisting of representatives of the National Builders' Supply Association, the cement manufacturers and the Associated General Contractors, to develop ways and means for the establishment of standard sales policies as a first step in the creation of a sound merchandising structure in the construction material field.

1083 ENGINEERS SEEK LICENSES

James F. Collins, Director of the State Department of Professional and Vocational Standards, in his report to the Governor's Council at its meeting in Sacramento April 30, stated that 1083 applications for licenses had been received from engineers up to April 19. Approximately 4500 application blanks and other printed matter for information of engineers regarding the new state license law have been mailed to persons listed as engineers, according to Secretary

Givan. It is estimated that 3000 civil engineers will ultimately be licensed by the state.

Reporting on the operations of the Section of Contractors' Registrations, Director Collins said: "The section showed an increase in March, 1930, over the preceding period as the result of an increasing number of complaints filed against licentiates operating under the contractors' registration law. The procedure followed in conducting investigations and holding first hearings or conferences, continues to prove highly satisfactory from a standpoint of results.

"All complaints filed with the section are receiving prompt attention, and where necessary, are brought as speedily as careful investigation will permit to the conference stage. The manner in which complaints have been handled and adjusted has brought many compliments and has tended to accelerate the registration and licensing of contractors.

"At the close of March, 1930, a total of 18,940 contractors and subcontractors had been registered and licensed by the section. Applications for licenses are continuing to be received at the rate of approximately 36 a day.

"During March a total of 54 complaints were filed with the section of contractors' registrations. In the same period nine licenses were ordered suspended. Cases adjusted and closed as a result of conferences numbered 26. Cases pending adjustment after conference totaled 19 at the end of the period. Cases carried beyond the conference stage and, because of the seriousness of their nature, brought before the Registrar of Contractors for formal hearing, totaled five. One case was pending formal hearing before the registrar at the close of the month."

WINS FINE ARTS MEDAL

The American Institute of Architects announces award of its fine arts medal for 1930 to Adolph Alexander Weinman, New York sculptor, and designer of the dime and half dollar of the current coinage. Weinman made the frieze of the Elks' memorial in Chicago, the monument to General Alexander Macomb in Detroit, the Maryland soldiers' and sailors' monument in Baltimore, and the Lincoln memorials in Hodgenville, Ky., Madison, Wis., and Frankfort, Ky.

The Institute awarded its craftsmanship medal to John Kirchmayer of Cambridge, Mass., wood carver who carved the altars, pulpits and bishop's thrones in several churches in New England, Detroit and Pittsburgh.

The medals were presented in Washington during the Institute's sixty-third convention.

BOOK REVIEWS

By Edgar N Kierulff

THE PARTITION HANDBOOK, by Erwin M. Lurie, C. E. (Member of Western Society of Engineers). Published by Associated Metal Lath Manufacturers, Inc., Engineers Building, Chicago. Price $1.00.

A handbook, paper bound, made to fit the files of the A. I. A. No. 20-6-14, covering the various types of partitions and embracing such important factors as space saving, fire protection, transmission of sound, etc. There will be found also a section devoted to working diagrams, specifications and installations.

Part II consists of construction methods and details, also a section on the erection of bricks and studding, as well as electrical installations and piping. It is an excellent reference book.

COLOR AND CHARM IN HOME INTERIORS, by Margaret McElroy. Published by Congolium-Nairn, Inc., Kearney, New Jersey.

A delightfully arranged brochure containing suggestions for harmonious decoration of the main rooms of the house, especially featuring complete schemes in the working out of appropriate colors for floors. The plates are in full color and nicely arranged. There is a section tritely written entitled, "What to do and not to do in decoration." This brochure will fit A. I. A. files and is numbered No. 23j. The publishers have arranged to send a copy gratis, to all readers of The Architect and Engineer, upon request.

NEW IRON PUBLICATION

The *Pure Iron Era* is the name of an attractive magazine published by the Armco International Corporation, the first number for 1930 having just appeared in twenty-four-page form with original cover picture in color. The table of contents includes articles on the following subjects, all well written and of value to those having occasion to specify ferrous medals: "Rapid Technical Advance Keeps Riveting in Van," by A. F. Jensen; "Rust Condemned Bridges Restored by Welding, "World Trend Back to Iron," by L. J. Lewery; "Katanga—the Home of Radium," by H. R. Pape; "Cape Town's Aerial Railway," "Iron in Art," by A. P. Denton; "Welding Machine Builds Battledeck Flooring."

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MUELLER COMBINATION FITTINGS

One of the outstanding features of the Four Fifty Sutter Medical Dental Building recently completed in San Francisco, is the hot and cold water combination fittings for physicians' and dentists' sterilizing and laboratory sinks, designed and manufactured by Mueller Company.

Fig. "A" shows a typical dentists' sterilizing sink with combination fitting for delivering either hot, cold or tempered water; also outlets for gas and compressed air.

The design of handles and spout and the inlaid index buttons are distinctive and modernistic in design. The valves are wrist action and deliver a full flow with one-quarter turn of the handles upward. Exposed metal parts are chromium plated. The wall escutcheons are black china, giving a very pleasing contrast.

Fig. "B" shows a typical laboratory sink. The fitting has white china handles and escutcheons with chromium plated metal parts.

FIG. A—TYPICAL DENTISTS STERILIZING SINK

FIG. B—TYPICAL LABORATORY SINK

In keeping with the general character of the building and particularly the physicians' and dentists' sinks, the architects, Messrs. Miller and Pflueger, and owners selected Mueller lavatory faucets and traps, control stops, and other plumbing brass goods throughout the building.

DUNHAM COMPANY BUDGET PLAN

Financing of heating system improvements out of the savings in fuel and other operating costs is now possible through a recently organized subsidiary of the C. A. Dunham Company, Chicago. This deferred payment business will be carried on by the American Funding Corporation, having an authorized capital of $1,250,000 providing for the change-over of present systems of heating to differential system operation.

Data secured by the company's engineers concerning the application of the Dunham differential vacuum heating system to existing buildings is termed "remarkable." All such change-over installations to date have made even greater fuel saving than was promised. Twenty-five per cent has proved to be a conservative figure; in some cases over fifty per cent of previous fuel costs is now saved.

The American Funding Corporation makes possible the immediate change-over of wasteful heating systems to differential operation. The investment required is arranged through the Funding Corporation contract and may be paid out of operating savings if so desired.

STREET LIGHTING CONTRACTS

H. C. Reid & Co., of San Francisco, have been awarded a contract by the Los Angeles County Supervisors to install a street lighting system in Brooklyn avenue, involving forty-eight Marbelite standards. The bid was $20,861.

The same firm at $25,758 submitted the lowest bid to the Los Angeles County Supervisors on May 19 to install a street lighting system in Pico Boulevard. The engineer's estimtae on this project was $28,198.

Pacific Coast Needs for Exterior and Interior Marble

IN order to better meet the marble needs of the Pacific Coast, Vermont Marble Company operates mills and finishing plants at San Francisco and Tacoma with the most modern equipment, and under supervision of men familiar with West Coast requirements, by workers whose earnings add to local prosperity. Sales offices at Los Angeles and Spokane. Quarries, Alaska, Montana and Colorado.

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INSULATION ON METAL LATH

A new building product which combines a well-known insulating material with a metal plaster base has been announced by the Flax-li-num Insulating Company of St. Paul.

This development is considered of more than ordinary significance, since it opens a new field of thought on insulating plaster bases. For the first time metal lath has been combined with an insulant in such a way that the two can be handled and installed as one unit.

A layer of Flax-li-num supplies the insulating value of the new product. To the Flax-li-num is attached diamond mesh metal lath which serves as a permanent and rigid base for plaster. Although these two products have been combined as far as handling is concerned, they are held separate in such a way that no plaster comes in direct contact with the insulating material. Consequently, the insulating value of the Flax-li-num is not impaired.

The manufacturers point out that since metal lath is recognized as a plaster base for its permanence, its fire-proof qualities, its elimination of unsightly plaster stripes, and for a rigidity which reduces danger of cracking, the new product will make an important contribution to better building practices. Architects say the idea is most logical and practical and that the combination of an insulating material with metal lath should encourage better and more permanent plastering jobs.

In order to find the most suitable name for the new product, its manufacturer conducted a prize contest among the trade. The name selected and the contest winner will be announced shortly.

BUILDING CONSTRUCTION

Organization of a definite program for the development of building, representing all the varied interests in the construction industry, is to be undertaken by the National Building Conference as the result of a meeting held recently at the Hotel Blackstone, Chicago. Fenton B. Turck Jr, chairman, explained that the National Building Survey Conference had come into being as a temporary organization only, but before the meeting adjourned it seemed to be the concensus of those present that a more permanent organization should be set up to formulate a national plan of action.

It was decided that this organization should be so constituted that it would be representative of all the varying interests within the sphere of construction and building. The personnel of this committee in addition to Mr. Turck, consists of Dr. Wilson Compton, secretary-manager, the National Lumber Manufacturers' Association; Ernest A. Hale, president, United States League of Building and Loan Associations; Leonard Reaume, president, National Association of Real Estate Boards; Benjamin Afflick, president, Universal Atlas Portland Cement, and Wil-

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Twenty-six years is quite a spell—a lot of water goes over the miller's wheel in a quarter of a century. Comparatively few mechanical devices made that long ago are in perfect operating condition today. But that's the habit of Kinnear Rolling Doors and Shutters. Ten, twenty, thirty years of perfect, uninterrupted service is the rule, not the exception. They just seem to mellow with age and, if anything, work a little smoother as time goes on.

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liam C. Cox, of the American Face Brick Association. This committee was empowered to select a larger committee from the building industry which would draft recommendations for action to be taken by the entire building industry.

"At this time we find a rapid flow of funds back to the real estate mortgage field," said Fenton B. Turck, in summarizing prevailing conditions. "This has been particularly noticeable in the last few weeks. Savings banks are now making a strenuous merchandising effort to put out their funds at the classic six per cent.

"It was learned from a dependable banking authority that on March 21, $200,000,000 was withdrawn from the call money market in New York by a group of small country bankers. This is an indication of the return of money to local centers. Also we find building and loan associations commencing to merchandise to their shareholders and friends the fact that likewise they have funds available for advisable building construction and for extensive alteration and repair activities."

Julius H. Barnes, chairman of the board, Chamber of Commerce of the United States, and chairman, National Business Survey Conference, outlined business conditions as they exist and the circumstances leading up to them over the past year.

NEW MILCOR PRODUCTS

One of the new, interesting and practical items illustrated in the Milcor Price Book is the Milcor milk and package receiver. This product is made from the highest grade of copper alloy steel sheets stamped and drawn. The hinges are integral with door and frame, no riveting or welding being employed. It is unbreakable.

Another brand new Milcor product is the flue or cleanout door.

Milcor is introducing a new square bead hanger made for use with square bead box gutters. This new hanger requires no bolts, nuts, screws or rivets and will securely hold gutter when clamped in position.

Stove pipe is another practical addition to the Milcor line. Selflock stove pipe is exactly what its name implies. No tools are required to make the pipe ready for use. It is only necessary to gently press the seam together and it is ready. Unlike other patent stove pipe, Selflock has the seam on the outside where it belongs. It is away from the action of corrosion and leaves the inside of the pipe unobstructed.

The new lines mentioned are additions to a very complete and diversified list of metal products which includes fireproof building commodities, ventilators and skylights, metal ceilings and walls, tile shingles and roofing, basement windows, etc.

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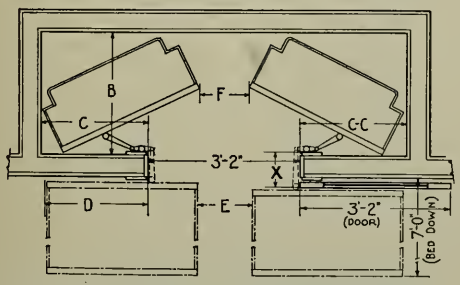

THICKNESS OF WALL INDICATED BY X, DETERMINES WHICH TABLE OF FIGURES IS TO BE USED

X - WALL including casings and door, not over		B	C	C-C	D	E	F
	6⅝"	31"	27"	27"	26"	14"	14"
	7⅝"	31"	27"	28"	26"	14"	14"
	8¾"	33"	27"	29"	26"	14"	15"

Here is a new twin AD A ROOM BED, the PEERLESS Installation. It offers architects several outstanding features. For instance, only one 3 foot 2 inch door is required to conceal two standard size twin beds. It makes obsolete the former installations that required two doors to conceal twin beds. Interior decorators will welcome this.

Another feature of this new PEERLESS Installation is that when the beds are down in the room they require less wall space than other installations.

Still another advantage is that when tenants prefer a double size bed the two twin beds can be easily and quickly removed by the house janitor and a double bed installed.

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Fine grained, homogeneous of texture, Port Orford Cedar does not splinter, crack or warp. Though extremely tough it is sufficiently yielding to deaden the sound of moving trucks and to prevent foot weariness. Its natural preservative oils protect it from the corrosion of acids, the decay of soils and water.

Because of these outstanding properties, Port Orford Cedar is widely used for bridge and boat decking, tunneling, piling, bulkheads and for boat and train loading platforms. Port Orford Cedar clear is eminently satisfactory for interior trim, entrances, porch columns, garden furniture, built-ins and Venetian Blinds.

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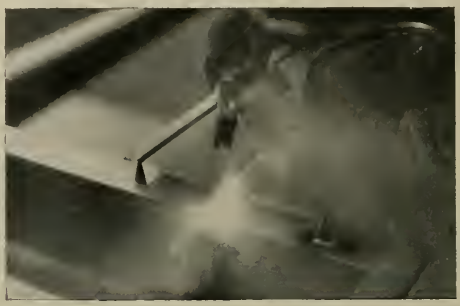
WELDED STEEL ROOF DECK

THE new "Cold Draw" building of the Babcock and Wilcox Tube Company at Beaver Falls, Pa., is of particular interest to engineers and contractors due to the fact that the steel roof deck of this tremendous building is welded to purlins, the first time in the history of building construction that this method of attachment has been employed successfully on an operation of such magnitude.

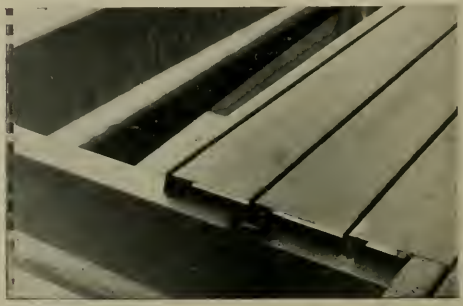


ARC WELDING TO PURLINS, WORKING FROM TOP OF ROOF

Over 99,700 square feet of Fenestra Holorib copper bearing steel roof deck were employed and in spite of the fact that adverse weather conditions made the installation difficult, the work was accomplished at a speed which compared favorably with that maintained by the old method of clipping. Costs were well within the average.

Although the fabrication of structural steel frames by the arc welding method has been growing in popularity, it has always been customary to anchor steel roof decks to the purlins by steel clips. The welding of decks to purlins has not been generally adopted due to the fact that most decks are so constructed that welding must be done from the underside, a slow, inconvenient and expensive process.

On the Babcock and Wilcox job, the engineers did all of the welding from above and laid 1000 squares of roof deck in sixteen working days, with two motor generator sets and twenty men. This speed was made possible by fastening the end of each sheet at the base



WELDING COMPLETED, ONE END OF UNIT FASTENED TO PURLIN

of the middle two ribs, the other end being telescoped three inches into the preceding unit. All welds were painted before being covered by the three-inch lap of the succeeding unit. The sheets at the eaves were the only ones where it is necessary to weld both ends.

By welding the center two ribs of each Holorib sheet, it was found the roof had strength sufficient to withstand an inside pressure of eighty-five pounds per square foot while the telescoping end laps supplied adjustability to absorb expansion, contraction or vibration in the frame.

The steel decks were covered with one-half inch of insulation and three plies of asbestos waterproofing felts. Both the owners and the general contractors, McClintic-Marshall Company, were well satisfied with the success of the welding. In the opinion of construction experts who saw the installation, it is considered one of the finest steel deck roofs in the country.

JOHNS-MANVILLE ACOUSTICS

The Johns-Manville Corporation have announcced the purchase of the assets and patents of the Stevens Sound Proofing Company of Chicago, manufacturers of patented structural products for sound insulating in walls, floors and ceilings, and for constructing anti-vibration platforms under machinery. The acquisition of these products makes an important addition to the present line of Johns-Manville acoustical materials, consisting of Nashkote felts in various forms, with both perforated and plain covers; Nashtile with a "plastic" finish and Sanacoustic tile, the latter product being a perforated metal tile containing rock wool. Each of those products is designed to fill a specific need and the group represents the latest developments in the acoustical field.

The Stevens systems have been widely used by well known architects and engineers to prevent vibration and sound from passing beyond its source in apartments, hotels, hospitals, office buildings, theaters, broadcasting studios, schools and clubs.

CLOCK COMPANIES MERGE

Amalgamation of the Pacific Electric Clock Company of Berkeley and the Standard Electric Time Company of Springfield, Massachusetts, is announced.

The name of the new organization will be the Standard Electric Time Company of California, and the merger will mean the gradual expansion of the Berkeley plant with distributing houses in San Francisco, Los Angeles, Seattle, Portland, Spokane, Phoenix and Bakersfield.

R. N. Smith is vice president and Pacific Coast manager of the organization.

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OIL BURNER SHOW BEST EVER

"THE best ever, seemed to be the unanimous opinion of the thousands who packed the floor of the Exposition Hall of the Seventh annual convention of the American Oil Burner Association held recently in Chicago," states J. C. Johnson, President of the S. T. Johnson Company, manufacturers for over twenty-five years of the nationally known line of Johnson oil burning equipment for every heating and power purpose.

"Not only was the trade enthusiastic, but the public, admitted for the first time to the oil burner show, signified its approval by 'saying it with orders!'

"The rapid acceptance and popularity of the oil burner as a most desirable method of creating heat, can undoubtedly be attributed to its convenience, cleanliness, economy and safety. An oil fire may be built by the turn of a switch. Through electrical control, all the processes of furnace-tending are made automatic. Thus the home owner with an automatic oil burner at his furnace door, need not rise in the chilly hours of the winter's morning to start the furnace. The housewife need no longer run "downstairs" to shovel coal or adjust dampers. The responsibility and labor of furnace tending is now accomplished by a thermostat on the hall or living room wall, which automatically controls the burner at the furnace door.

"In fact, when the thermostat is set at the temperature desired, and the hour heat is wanted in the morning or stopped at night, in that minute, the whole season's furnace tending is done.

"The entire house is much easier to keep clean, and may be heated at a comfortable, uniform, healthful temperature, regardless of the weather."

The installation of the Johnson oil burner in schools, public buildings, commercial and industrial plants has also created an entirely new standard of efficiency and economy. Boiler room labor has been reduced from 50 to 75 per cent, even where coal and ashes are handled by modern stokers and hoists.

The full heating capacity of the furnace or boiler is available at a moment's notice. With equal promptness the fire may be reduced or shut off completely. Fuel is burned only when heat is actually needed. The fuel may be bought as needed, eliminating the necessity of storing or buying large quantities to be certain of delivery, and to take advantage of seasonal prices, as is necessary when other types of fuel are used.

The space formerly occupied by ash cans and coal bins can be converted into an additional useful space, as easy to keep clean as any other part of the building.

Mr. Johnson says that one of the outstanding developments of oil burner industry is the thorough education of dealers, salesmen and mechanics, and the perfection of installation and service facilities, so that the architect, builder, heating engineer and

home owner may have necessary work efficiently and dependably done, whenever desired.

UNITED MATERIALS REORGANIZED

The recent passing of Samuel W. Smith, President of the United Materials Company and the Richmond Pressed Brick Company, has necessitated a reorganization with T. D. C. Johnson, for the past year managing director, elected to the presidency and general managership, while H. F. Goss becomes vice president and plant superintendent; L. A. Koplan, secretary and treasurer, and E. E. Ellison, assistant secretary and sales manager. The company is occupying new offices in the Bank of America Building. San Francisco, having moved there from the Sharon Building just prior to Mr. Smith's death. The latter had been identified with the United Materials Company since its organization in 1907, his co-partner beng the late Wilbur S. Hoyt.

The Richmond Brick plant was taken over from the Los Angeles Pressed Brick Company in 1909. Some of the first soft brick manufactured in Northern California were made at the Richmond plant many years ago by Chinese labor. The Richmond plant is now being completely modernized. The new equipment, which includes a large bridge crane, storage bins and grinders, represents an expenditure of more than $50,000. Two of the most recent contracts completed by the Richmond Company were the Taylor Hotel, San Francisco, and the Capwell department store, Oakland, both of which jobs called for one-half million face brick on each building.

MAY MEETING SEATTLE CHAPTER

The regular May meeting of the Washington State Chapter was held at the College club, Seattle, Thursday, May 1, with a good attendance from both Seattle and Tacoma.

The secretary read letters from former Regional Director A. H. Albertson.

The first letter was in regard to the Institute's new Administration and Library Building of which Institute members had recently been informed through a circular from the Octagon. Mr. Albertson was strongly in favor of the Octagon being retained by the Institute and feared that if the building was furnished and opened to the public as a monument, as proposed in the circular, that this might be a step towards its eventually being given away.

The other letter was in regard to the proposed revision of the Institute by-laws. Mr. Albertson explained that this revision arose from a desire to guard a very considerable bequest to the Institute now pending.

He thought objection should be taken to the proposal to give the Board of Directors the power to sell, buy or lease the Octagon or any other real property of the Institute's without the action of the Convention.

No Buckling, Squeaking or Doming, When You Use the Bull Dog Method

STEP FIVE—SLUSHING IN. *This, together with wedging, insures an absolutely FIRM AND SOLID BEARING the entire length of the strip.*

THE Bull Dog Method and process of anchoring wood floors over concrete prevents buckling, squeaking and doming. Once properly wedged and slushed, the sleepers hold the floors rigidly, permanently.

Other advantages are: ***elimination of dry rot,*** doubling floor life; saving of construction time, for there is no fill to dry, no beveling or shimming, sleepers and finished floor are laid at one time; reduction of dead load 18,000 lbs. to 1,000 square feet of slab area. The Junior Clip (⅝" wide) may be used with or without a fill (dependent on the service duty of the floor.) When a fill between the sleepers is desired, any cheap, inexpensive mix such as sand, cinders or cinder concrete can be used.

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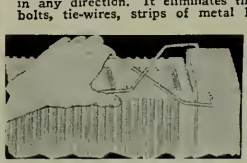
REGULAR CLIP—*3 sizes, 2, 3 and 4 in. 20 gauge galvanized iron.*

Original Patent granted June 14, 1921
Reissue Patent granted June 29, 1924
Process Patent granted May 19, 1925

JUNIOR CLIP—*3 sizes, 2, 3 and 4 in. 18 gauge galvanized iron.*

The Bull Dog Buck Anchor

THE Bull Dog Buck Anchor forms a rigid truss in the mortar joint which prevents the movement of the buck in any direction. It eliminates the use of nails, screws, bolts, tie-wires, strips of metal lath and iron, and all pounding against the back sides of the back. Made in three widths of No. 10 Galvanized Steel Wire: 3 in., 4 in., 6 in. Ten per cent of anchors in packing cases are shorts to take care of spaces too short for the regular size anchor.



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Ric-wiL Engineers, with 20 years' experience, will be glad to help you solve any underground conduit problem. Feel free to write us at any time.

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UNDERGROUND CONDUIT

Detail of Entrance, Rossman Warehouse, San Francisco
FRED'K. H. MEYER, *Architect*

Rossman "Champleve" Tile is used for the exterior, while the vestibule is of Rossman Imported Spanish and "Nubian" Tile.

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49 Geary Street *San Francisco*
Architects Building *Los Angeles*

HARD TIMES—ECONOMIC HISTORY REPEATS ITSELF

One of San Francisco's important industries, allied with the building construction business, has broadcast an open letter anent "hard times" which is well worth reading. The letter follows:

Frankly, times haven't been any too good, and like Mr. Micawber, we have been largely sitting around "waiting for something to turn up."

We've been fed up on the truism, "business depression is a state of mind." This has been drilled into us by the current press, and by our political and financial advisers, local and otherwise.

Nevertheless there is no use trying to deceive ourselves. Call our troubles what you may—over-speculation, prohibition, tariff agitation or over production—we just have a suspicion that they are the culmination of a series of idiocies, overdue—and richly earned by diligent departure from lines of good sense.

Personally—we are taking advantage of this slack period to spruce up generally around our establishment. Nobody has been discharged, nobody's salary has been cut, and the payment of bills has not been unduly delayed.

Our employees have been imbued with the spirit of giving the best service possible, and the public has never been better or more promptly served.

We are also doing a little extra advertising, giving out all the work we can to other concerns, and making a few extra calls on our friends and clients—not to talk "hard times," but just to shake hands warmly and cheerily say "Howdy!"

While we believe careful consideration should be given to major expenditures, we do not believe it is a time for penuriousness or narrowness in thought or act; in fact, liberal, sound-thinking may be good for us, for the world is moving pretty fast—"we are not the only ducks" in the national or industrial puddle—we don't want to be side-tracked over night.

We may be getting a little deeper in the hole financially, but the hole is getting smaller all the time, and if we maintain our poise the hole will soon be closed altogether, and business resumed under better conditions than for years.

Large concerns and public utilities employing thousands should remember—they have the same responsibility regarding the welfare of individual employees as the little fellow—the same responsibility for keeping the wheels of commerce moving, and they have no more license for discharging a lot of people who have faithfully served through "good times" than have the small concerns. In fact, it is more incumbent upon "big business" to do its full share in maintaining the employment balance.

We are writing this letter in hopes that if you are not already earnestly working on the same situation, you will join us in a sane effort to improve your, our, the community and the nation's business status.

Many of those addressed have been associated in our business zone one way or another for nearly thirty years—and we have weathered various trying periods together—quite as bad or worse than that with which we are confronted.

Don't let's wait around any longer for some great political stunt to be pulled off or spectacular financial movement to scintillate on the business horizon. Let's get busy—each putting his own house in order, thus showing confidence in ourselves and the future, and

[Concluded on Page 141]

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts quoted are figuring prices and are made up from average quotations furnished by material houses to three leading contracting firms of San Francisco.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

Overtime in wage scale should be credited with time and a half, Sunday and holidays double.

Bond—1½% amount of contract.

Brickwork—

Common, $32 to $38 per 1000 laid, (according to class of work).
Face, $90 to $115 per 1000 laid, (according to class of work).
Brick Steps, using pressed brick, $1.10 lin. ft.
Brick Walls, using pressed brick on edge, 75c sq. ft. (Foundations extra.)
Brick Veneer on frame buildings, $ .90 sq. ft.
Common, f.o.b. cars, $14.50 plus cartage.
Face, f.o.b. cars, $55.00 per 1000, carload lots.

HOLLOW TILE FIREPROOFING (f.o.b. cars in carload lots).

3x12x12 in.	$ 96.00 per M
4x12x12 in.	108.00 per M
6x12x12 in.	156.00 per M
8x12x12 in.	255.00 per M

HOLLOW BUILDING TILE (f.o.b. cars in carload lots).

8x12x5½	$108.00
6x12x5½	74.00

Composition Floors — 18c to 30c per sq. ft. In large quantities, 18c per sq. ft. laid.
Rubber Tile—65c per sq. ft.

Terazzo Floors—50c to 60c per sq. ft.
Terazzo Steps—$1.50 per lin. ft.
Mosaic Floors—80c per sq. ft.

Concrete Work (material at San Francisco bunkers) — Quotations below 2000 lbs. to the ton.

No. 3 rock, at bunkers	$1.40 per ton
No. 4 rock, at bunkers	1.40 per ton
Eliott pea gravel, at bnkrs.	1.40 per ton
Washed gravel, at bnkrs.	1.40 per ton
Eliott top gravel, at bnkrs.	1.40 per ton
City gravel, at bunkers	1.40 per ton
River sand, at bunkers	1.00 per ton
Delivered bank sand	1.00 cu. yd.

Note—Above prices are subject to discount of 10c per ton on invoices paid on or before the 15th of month, following delivery.

SAND

Del Monte, $1.75 to $3.00 per ton.
Fan Shell Beach (car lots, f.o.b. Lake Majella), $2.75 to $4.00 per ton.
Cement, $2.44 per bbl. in paper sks.
Cement (f.o.b. Job, S. F.) $2.64 per bbl.
Cement (f.o.b. Job, Oak.), $2.64 per bbl.
Rebate of 10 cents bbl. cash in 15 days.
Atlas "White" .....$ 8.50 per bbl.
Forms, Labors average 22.00 per M.
Average cost of concrete in place, exclusive of forms, 28c per cu. ft.
4-inch concrete basement floor.....13c to 14c per sq. ft.
4½-inch concrete basement floor.....14c to 15c per sq. ft.
2-inch rat-proofing.....6½c per sq. ft.
Concrete Steps.....$1.26 per lin. ft.

Dampproofing—

Two-coat work, 20c per yard.
Membrane waterproofing—4 layers of saturated felt, $5.50 per square.
Hot coating work, $2.00 per square.

Electric Wiring — $3.00 to $9.00 per outlet for conduit work (including switches).
Knob and tube average $2.25 to $5.00 per outlet, including switches.

Elevators—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2500; direct automatic, about $2400.

Excavation—

Sand, 60 cents; clay or shale, $1.00 per yard.
Teams, $10.00 per day.
Trucks, $21 to $27.50 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—

Ten-foot balcony, with stairs, $65.00 per balcony.

Glass (consult with manufacturers)—

Double strength window glass, 15c per square foot.
Quartz Lite, 50c per square foot.
Plate 80c per square foot.
Art, $1.00 up per square foot.
Wire (for skylights), 27c per square foot.
Obscure glass, 25c per square foot.
Note—Add extra for setting.

Heating—

Average, $1.80 per sq. ft. of radiation, according to conditions.

Iron—Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg.site)
Common, $23.00 per M (average).
Common O. P. select, average, $30.00 per M.

1 x 6 No. 3—Form lumber	$20.00 per M
1 x 4 No. 1 flooring	42.00 per M
1 x 4 No. 2 flooring	40.50 per M
1 x 4 No. 3 flooring	35.00 per M
1 x 6 No. 2 and better flooring	41.00 per M
1¼ x 4 and 6 No. 2 flooring	50.00 per M

Slash grain—

1 x 4 No. 2 flooring	$35.00 per M
1 x 4 No. 3 flooring	33.00 per M
No. 1 common run to T. & G.	30.00 per M
Latb	4.50 per M

Shingles (add cartage to prices quoted)—

Redwood, No. 1	$ .90 per bdle.
Redwood, No. 2	.75 per bdle.
Red Cedar	.90 per bdle.

Hardwood Flooring (delivered to building)—

13-16x3¼" T & G Maple	$135.00 M ft.
1 1-16x2¼" T & G Maple	145.50 M ft.
⅞x3½ sq. edge Maple	132.50 M ft.

	13-16x2¼" T&G	⅜x2" T&G	5-16x2" Sq. Ed.
Clr. Qtd. Oak	$220.00 M	$160.00 M	$178 M
Sel. Qtd. Oak	150.00 M	122.00 M	131 M
Clr. Pla. Oak	155.00 M	110.00 M	113 M
Sel. Pla. Oak	132.00 M	79.00 M	97 M
Clear Maple	147.00 M	101.00 M	
Laying & Finisbing	16c ft.	16c ft.	13c ft.

Wage—Floor layers, $9.00 per day.

Building Paper—

1 ply per 1000 ft. roll	$4.00
2 ply per 1000 ft. roll	6.00
3 ply per 1000 ft. roll	9.25
Sash cord com. No. 7	$ 1.05 per 100 ft.
Sash cord com. No. 8	1.20 per 100 ft.
Sash cord spot No. 7	1.75 per 100 ft.
Sash cord spot No. 8	1.10 per 100 ft.
Sash weights cast iron	57.00 ton

Nails, $3.25 base.
Belgian nails, $3.00 base.

Millwork—

O. P. $80.00 per 1000. R. W., $85.00 per 1000 (delivered).
Double hung box window frames, average, with trim, $6.00 and up, each.
Doors, including trim (single panel, 1¾ in. Ore. pine) $6.75 and up, each.
Doors, including trim (five panel, 1¾ in. Oregon pine) $6.00 each.
Screen doors, $3.50 each.
Patent screen windows, 20c a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., $5.50 each.
Dining room cases, $6.50 per lineal foot.
Labor—Rough carpentry, warehouse heavy framing (average), $11.00 per M.
For smaller work, average, $22 to $30 per 1000.

Marble—(Not set), add 50c to 65c per ft. for setting.

Alaska	$1.40 sq. ft.
Columbia	1.40 sq. ft.
Golden Vein Yule Colo	1.70 sq. ft.
Pink Lepanto	1.50 sq. ft.
Italian	1.75 sq. ft.

Tennessee ..... 1.70 sq. ft.
Verde Antique ..... 3.00 sq. ft.

NOTE—Above quotations are for ⅞ inch wainscot in large slabs f.o.b. factory. Prices on all other classes of work should be obtained from the manufacturers.

Floor Tile—Set in place.

Verde Antique .....$2.50 sq. ft.
Tennessee ..... 1.50 sq. ft.
Alaska ..... 1.35 sq. ft.
Columbia ..... 1.45 sq. ft.
Yule Colorado ..... 1.45 sq. ft.
Travertine ..... 1.60 sq. ft.

Painting—

Two-coat work .....30c per yard
Three-coat work .....40c per yard
Whitewashing ..... 4c per yard
Cold Water Painting ..... 8c per yard
Turpentine, 90c per gal. in cans and 75c per gal. in drums.
Raw Linseed Oil—$1.36 gal. in bbls.
Boiled Linseed Oil—$1.39 gal. in bbls.

Carter or Dutch Boy White Lead in Oil (in steel kegs)

Per. Lb.
1 ton lots, 100 lbs. net weight 12¾c
500 lb. and less than 1 ton lots 13c.
Less than 500 lb. lots .....13½c.

Dutch Boy Dry Red Lead and Litharge (in steel kegs)

1 ton lots, 100 lb. kegs, net wt. 12¼c
500 lb. and less than 1 ton lots 12½c
Less than 500 lb. lots.....13c

Red Lead in Oil (in steel kegs)

1 ton lots, 100 lb. kegs, net wt. 12¼c
500 lb. and less than 1 ton lots....14c
Less than 500 lb. lots.....14¼c

Note—Accessibility and conditions cause wide variance of costs.

Patent Chimneys—

6-inch.....$1.00 lineal foot
8-inch..... 1.50 lineal foot
10-inch..... 1.85 lineal foot
12-inch..... 2.10 lineal foot

Pipe Casings — 12″ long (average), $7.50 each. Each additional inch 10c.

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.40
2 coats, lime mortar hard finish, wood lath	.52
2 coats, hard wall plaster, wood lath	.55
3 coats, metal lath and plaster	1.00
Keene cement on metal lath	1.25
Ceilings with ¾ hot roll channels metal lath	.67
Ceilings with ¾ hot roll channels metal lath plastered	1.40
Shingle partition ¾ channel lath 1 side	.62
Single partition ¾ channel lath 2 sides 2 inches thick	2.20
4-inch double partition ¾ channel lath 2 sides	1.80
4-inch double partition ¾ channel lath 2 sides plastered	2.45

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
2 coats Atlas cement, brick or concrete wall	1.25
3 coats cement finish No. 18 gauge wire mesh	1.75
3 coats Atlas finish No. 18 gauge wire mesh	2.05

Wood lath, $4.50 per 1000.
2.5-lb. metal lath (dipped) ..... .19
2.5-lb. metal lath (galvanized) ..... .22
3.4-lb. metal lath (dipped) ..... .21
3.4-lb. metal lath (galvanized) ..... .29
¾-inch hot roll channels, $45 per ton.
Hardwall plaster, $15.40 ton; $12.95 in paper sacks (rebate 15c sack).
Finish plaster, $16.40 ton; in paper sacks, $13.85 (rebate 10c sack).
Dealer's commission, $1.00 off above quotations.
Hydrate Lime, $19.50 ton.
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $43.00 per M.

Composition Stucco—$1.60 to 2.00 per sq. yard (applied).

Plumbing—

From $60.00 per fixture up, according to grade, quantity and runs.

Roofing—

"Standard" tar and gravel, $5.25 per square for 30 squares or over.
Less than 30 squares, $5.50 per sq.
Tile, $19.00 to $35.00 per square.
Redwood Shingles, $11.00 per square in place.
Cedar Shingles, $10.50 sq. in place.
Recoat, with Gravel, $3.00 per sq.

Sheet Metal—

Windows—Metal, $1.80 a sq. foot.
Fire doors (average), including hardware, $2.00 per sq. ft. (not

Skylights—

Copper, $1.35 sq. ft. (not glazed).
Galvanized iron, 28c sq. ft. (not glazed).

Stone—

Granite, average, $5.50 sq. foot in place.
Sandstone, average Blue, $3.50; Boise, $2.60 sq. ft. in place.
Indiana Limestone, $2.60 per sq. ft. in place.

Store Fronts—

Copper sash bars for store fronts, corner, center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Steel Structural—$85.00 per ton erected). This quotation is an average for comparatively small quantities
Light truss work higher; plain beam and column work in large quantities, less.
Cost of steel for average building (erected), $82.00 per ton.

1930 WAGE SCHEDULE FOR SAN FRANCISCO BUILDING TRADES

FIXED BY S. F. BUILDERS EXCHANGE

Craft	Journeymen Mechanics
Asbestos workers	$ 8.00
Bricklayers	11.00
Bricklayers' hodcarriers	7.00
Cabinet workers, (shop)	7.50
Cabinet workers, (outside)	9.00
Carpenters	9.00
Cement finishers	9.00
Electric workers	9.00
Electrical fixture hangers	8.00
Elevator constructors	10.00
Elevator helpers	7.00
Engineers, portable and hoisting	9.00
Glass workers	8.50
Hardwood floormen	9.00
Housemovers	8.00
Housesmiths, arch. iron, skilled all branches	9.00
Housesmiths, arch. iron, not skilled all branches	8.00
Housesmiths, reinforced concrete, or rodmen	9.00
Iron workers (bridge & structural) including engineers	11.00
Laborers, building (6-day week)	5.50
Lathers, channel iron	10.00
*Lathers, all other	8.50
Marble setters	10.00
Marble helpers	6.00
Marble cutters and copers	8.00
Marble bed rubbers	7.50
Marble polishers and finishers	7.00
Millmen, planing mill department	7.00
Millmen, sash and door	6.00
Millwrights	8.00
Model makers	10.00
Model casters	9.00
Mosaic and Terrazzo workers	9.00
Mosaic and Terrazzo helpers	6.00
Painters	9.00
Painters, varnishers and polishers (shop)	7.50
Painters, varnishers and polishers (outside)	9.00
Pile drivers and wharf builders	9.00
Pile drivers engineers	10.00
Plasterers	11.00
Plasterers' hodcarriers	7.50
Plumbers	10.00
Roofers, composition	8.00
Roofers, all others	8.00
Sheet metal workers	9.00
Sprinkler fitters	10.00
Steam fitters	10.00
Stair builders	9.00
Stone cutters, soft and granite	8.50
Stone setters, soft and granite	9.00
Stone carvers	8.50
Stone derrickmen	9.00
Tile setters	10.00
Tile helpers	6.00
Auto truck drivers, less than 2500 lbs.	5.50
Auto truck drivers, 2500 to 4500 lbs.	6.00
Auto truck drivers, 4500 to 6500 lbs.	6.50
Auto truck drivers, 6500 lbs. and over	7.00
General teamsters, 1 horse	5.50
General teamsters, 2 horses	6.00
General teamsters, 4 horses	6.50
Plow teamsters, 4 horses	6.50
Scraper teamsters, 2 horses	6.00
Scraper teamsters, 4 horses	6.00

*On wood lath if piece rates are paid they shall be not less than such an amount as will guarantee, on an average day's production of 1600 lath, the day wage set forth.

Eight hours shall constitute a day's work for all Crafts except as otherwise noted.

Plasterer's hodcarriers, bricklayers' hodcarriers, roofers, laborers, and engineers, portable and hoisting, shall start 15 minutes before other workmen, both at morning and noon.

Five days, consisting of eight hours on Monday to Friday inclusive, commencing January 31, 1930, shall constitute a week's work.

Overtime shall be paid as follows: For the first four hours after the first eight hours, time and one-half. All time thereafter shall be paid double time. Saturday (except laborers), Sundays from 12 midnight Friday, and Holidays from 12 midnight of the preceding day shall be paid double time. On Saturday laborers, building, shall be paid straight time.

Where two shifts are worked in any twenty-four hours shift time shall be straight time. Where three shifts are worked, eight hours pay shall be paid for seven hours on the second and third shifts.

All work shall regularly be performed between the hours of 8 A. M. and 5 P. M., provided, that in emergencies or where premises cannot be vacated for work by mechanics until the close of business, men then reporting for work shall work at straight time; but any work performed after midnight shall be paid time and one-half except on Saturdays, Sundays, and holidays, when double time shall be paid.

Recognized holidays to be New Year's Day, Decoration Day, Fourth of July, Labor Day, Admission Day, Thanksgiving Day and Christmas Day.

Men ordered to report for work, for whom no employment is provided, shall be entitled to two hours pay.

we will soon forget that business has been out of tune.

Bye and bye in years to come, we or our successors will be called upon to meet like periods of readjustment, for economic "history does repeat itself."

Will you join us in a sane house-to-house program of reconstruction?

INSPECTING ENGINEERS ORGANIZE

In December last, a group of Inspecting Engineers and representatives of Testing Laboratories from all sections of the country met in Detroit, Michigan, and formed a preliminary organization among those engaged in the practice of testing and supervising the manufacture and use of various engineering materials for construction work of federal, state and city governments; public service corporations; railroad and highway construction and maintenance; bridges; office, manufacturing, educational and other building projects.

At a second meeting held April 3 and 4, also at Detroit, the success of the preliminary gathering was continued and there was finally concluded the formation of the National Engineering Inspection Association.

The Association adopted complete constitution and by-laws, and code of ethics. The former states the object of the Association is, "to promote a proper understanding and co-operation among those engaged in and concerned with Engineering Inspection; to establish practices which will prove beneficial to proper service and to develop and encourage better and more effective supervision of the affairs of the Association by the officers and Board of Directors as well as arrangements for semi-yearly general meetings.

The charter membership consists of individuals, partnerships and corporations about equally divided between the four sections of the country.

OF INTEREST TO ART STUDENTS

The Department of Art, University of California, Berkeley, announces that for both Intersession and Summer Session of 1930 it will enjoy the services of Hans Hofmann, of Munich, Germany. Mr. Hofmann is a distinguished painter and director of the Schule fur bildende Kunste in Munich. He also usually conducts a summer school for painters on the Island of Capri in Italy or at St. Tropez on the French Riviera. The schools are frequented by advanced students of many nationalities.

In both Intersession and Summer Session Mr. Hofmann will conduct advanced courses in life drawing and in pictorial composition. While thoroughly conversant with all the phases of modern art as practiced in Europe, the instructor will stress those elements of construction in form and color that lie at the bottom of all the best drawing and painting.

To supplement the instruction of Mr. Hofmann, Associate Professor Worth Ryder will lecture daily on

Life Science Building, Berkeley

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European painting, beginning with the Renaissance in Italy, and will conduct an advanced undergraduate course in painting. Professor Ryder has studied painting for many years in France, Germany and Italy, as well as in this country.

Ray S. Boynton, painter of both murals and easel pictures, will conduct a course in landscape composition and a course in figure composition for advanced undergraduates. Mr. Boynton has studied informally in Mexico, the art of Diego Rivera. His frescoes at Mills College give evidence of his catholicity of taste and broad artistic powers.

J. W. GREGG GOES EAST

John W. Gregg, professor of landscape design in the University of California College of Agriculture, and associate editor of THE ARCHITECT AND ENGINEER, will spend the summer visiting colleges and universities in the East and Middle West. Professor Gregg will study the methods of research and instruction and the equipment used in landscape architecture in other institutions.

WIN MEDALS

Distinguished honors have been won by two University of Washington students in architecture. Jack Graham, son of John Graham, architect of Seattle, won first medal in a Class "A" Project of the Beaux Arts Institute of Design. Miss Flora S. Allen, now a senior at the University, was awarded second medal in the same competition.

GRANTED CERTIFICATES

At the meeting of the State Board of Architectural Examiners, Northern District, May 27th, 1930, the following were granted Provisional Certificates to practice architecture in California: George A. Schastey, Monadnock Building, and James F. McGuinness, 488 Pine Street, both of San Francisco.

THE ROMANCE OF IRON AND STEEL

"A Visit to Armco with the Iron Master" is the unique title of an interesting booklet just published by the American Rolling Mill Company of Middletown, Ohio. The book is in answer to repeated requests of those interested in the romance of the iron and steel industry. It is illustrated.

RANCH HOUSE

William Mooser, architect, Monadnock Building, San Francisco, and 121 Anapamu Street, Santa Barbara, has completed plans for a part one and two story reinforced concrete ranch house to be erected at Goleta, just outside the Santa Barbara city limits, for Albert B. Spaulding.

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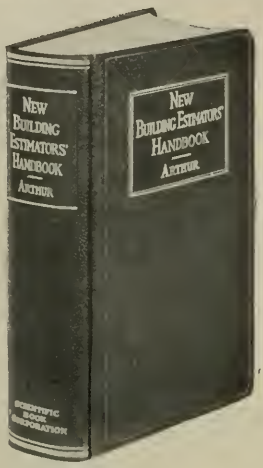

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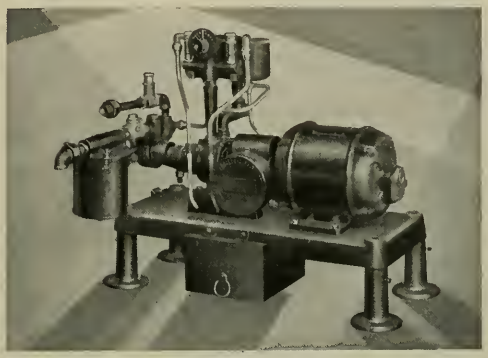

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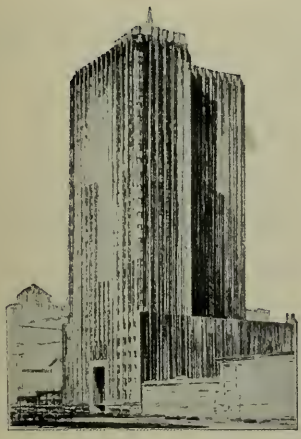

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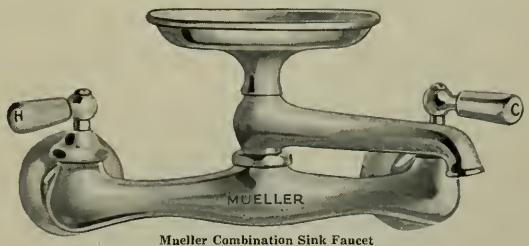

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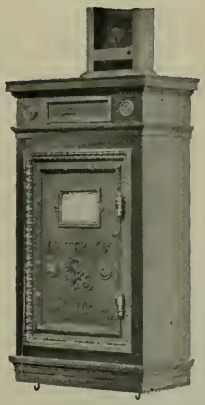

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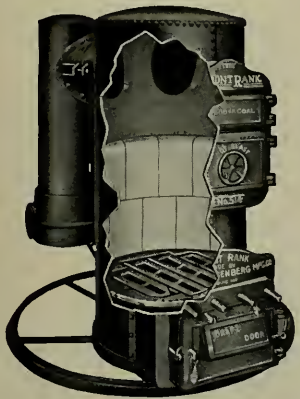

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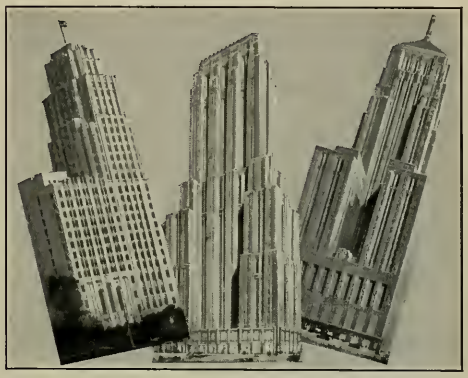

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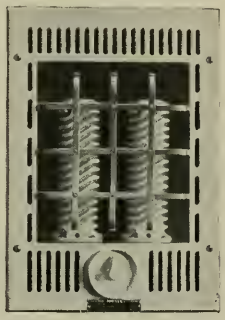

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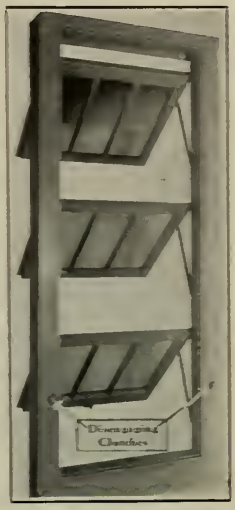

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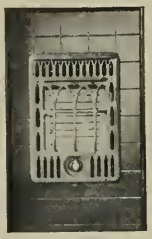

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JULY
1930

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Who's Who in this Issue

GEORGE W. KELHAM, architect of the Shell Oil Building, San Francisco, was born in Manchester, Massachusetts. He studied architecture at Harvard University, Paris and Rome. He practiced the profession in New York City from 1898 to 1908, coming to San Francisco in 1906 to supervise construction of the Palace Hotel. Mr. Kelham served as Chief in the Department of Architecture of the Panama Pacific International Exposition, 1912-15. Upon the retirement of John Galen Howard he was appointed Supervising Architect for the University of California. Among the notable buildings designed by his office are the following: American Bank, Anglo & London-Paris National Bank, Balfour-Guthrie, California Commercial Union, California State Automobile Association, Federal Reserve Bank, Medico-Dental, Walton N. Moore, Russ, San Francisco Public Library, San Francisco Golf and Country Club, Sharon Estate, Standard Oil in San Francisco and Los Angeles, Claremont Country Club, Oakland, Central National Bank Building, Oakland, and the Continental National Bank, Salt Lake City. Mr. Kelham is a member of the San Francisco Chapter, A. I. A., Beaux Arts Architects of New York and Pacific Union Club, San Francisco. During the war he served as a member of Company K, Seventh Regiment, National Guard, New York.

HENRY H. GUTTERSON, architect of the Christian Science Benevolent Association Building, is a native of Owatonna, Minnesota. He received his education in the University of California and the Ecole des Beaux Arts, Paris. He began his architectural career in the offices of D. H. Burnham, Willis Polk and John Galen Howard, San Francisco. In 1915 he was associated with the architectural staff of the Panama Pacific Exposition. Later he became designer and office manager for John J. Donovan, at the time Mr. Donovan was City Architect of Oakland. Mr. Gutterson at one time served as instructor in the School of Architecture, University of California. He began the practice of architecture independently in San Francisco in 1913. That same year he was made Supervising Architect at St. Francis Wood. Besides being architect of the Christian Science Benevolent Association Building, Mr. Gutterson designed the White Company Building in San Francisco, and a number of the more prominent Christian Science churches and residences in the Bay Region. He is a member of the California Development Association, University of California Alumni Association, Commonwealth Club, San Francisco Yacht Club and Delta Kappa Epsilon.

JOHN BAKEWELL, Jr., who describes Mr. Gutterson's Christian Science Building, is a native of Topeka, Kansas. He is a son of the late Rev. John Bakewell. He was graduated from the Ecole des Beaux Arts in 1901 since which time he has practiced architecture in San Francisco, first as a member of the firm of Bakewell and Brown and at the present time as associate of Ernest Weihe. As a member of the firm of Bakewell and Brown he achieved prominence in winning the competition for the San Francisco City Hall and later the competition for the Pasadena City Hall. Mr. Bakewell is prominent in club circles, being a member of the Pacific Union, Olympic and San Francisco Press Clubs. He is a past president of Northern California Chapter, A. I. A.

HALLAM H. ANDERSON, whose article on the Shell Building appears in this number, served as the owners' general representative during the design and construction of the building. A newcomer to the bay district, Mr. Anderson's previous work was as Chief Engineer of the Production Department, in which capacity he represented the Shell Oil Company in many cooperative activities of the petroleum industry —safety, standardization, research, fire-prevention, waste water disposal, etc. He served as Chairman of the American Petroleum Institute's general committee on Well Drilling Practice during its year of organization. He was a director and assisted in the design and construction of two large cooperative waste water disposal systems in the Southern California oil-fields. He holds degrees of B. S. in E. E. and A. M. His interest in the oil industry in 1917 averted the completion of work for Ph. D. in physics and mathematics. A member of both American Institute of Electrical Engineers and American Society of Mechanical Engineers, he resigned as Chairman of the Los Angeles Section of the latter organization at the time of his transfer to San Francisco.

HUNTER & HUDSON, Consulting Engineers for the mechanical, electrical, and plumbing equipment in the new Shell Building, have been associated in engineering practice in San Francisco since 1907. **Mr. Hunter** was born in Washington, D. C. He entered Stanford University in 1900, graduating in 1904 from the Department of Civil Engineering and for a time thereafter he was Engineer for the Monterey County Water Works. During 1912 he was in San Diego as Engineer for the Panama California Exposition. **Mr. Hudson** was born in San Jose, California, entered Stanford University in 1902, graduating in 1906 from the Department of Mechanical Engineering. Some of the major buildings, the mechanical equipment of which was designed by this firm, are the Palace Hotel, San Francisco Library and Auditorium, Balfour, California Commercial Union, Standard Oil, Medico Dental, Anglo & London Paris National Bank, Crocker First National Bank, Federal Reserve Bank, Sir Francis Drake Hotel, Russ and Shell Buildings, all of San Francisco; Oakland and Central Bank Buildings, Oakland; Life Science Building and International House of the University of California, Berkeley; the entire group of buildings for the University of California at Los Angeles; California Club and Standard Oil Buildings, Los Angeles; Stanford University Hospital, San Francisco, and many of the buildings at Stanford University.

▲ ▲ ▲ 30,000 square feet of United States Rubber Tiling used in the elevator lobbies and corridors of the Shell Oil Building, San Francisco

Typical Elevator Lobby, Shell Oil Building, San Francisco

GEO. W KELHAM, *Architect* P. J. WALKER CO., *Builders*

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VOLUME CII
NUMBER 1

The ARCHITECT AND ENGINEER

JULY
1930

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Contents

COVER DESIGN—The Shell Building, San Francisco
John Ekin Dinwiddie
FRONTISPIECE—The Shell Building at Night
Photo by Gabriel Moulin

TEXT

The Shell Building at San Francisco 35
Hallam H. Anderson
Mechanical and Electrical Equipment of the Shell Building 50
R. A. Hudson, M. E.
Regulation of High Building Design 55
H. C. Allen, A. I. A.
A Christian Science Sanatorium 58
John Bakewell, Jr., A. I. A.
How to Combat the Dampwood Termite 79
S. F. Light, S. P. Koch and E. E. Bowe
Institute Censors Billboard 83
Acoustics of Sound Motion Picture Theaters 84
Keith Friend
Architectural Control 91
The San Gabriel Dam 94
Alan S. Hart, C. E.
Steel Beams Stronger When Encased in Concrete 96
The Architect's Viewpoint 98
W. C. Hays, F. A. I. A.
With the Architects 101
Society and Club Meetings 107

PLATES AND ILLUSTRATIONS

SHELL BUILDING, SAN FRANCISCO
Geo. W. Kelham, Architect

Pencil Sketch 35
Third and 20th Floor Plans 36, 37
Airplane View 39
Exterior Views 40, 41, 42
Vestibule Ceiling 43
Vestibule (looking out) 44
Main Elevator Lobby 45
Detail of Entrance 46
Detail of Elevator Door 47
Lobby Floor 48
Vertical View 48
Elevator Lobby 49
Upper Story Detail 49
Entrance to Garage 51
Detail of Facade 51
Detail of Spandrel 52

CHRISTIAN SCIENCE SANATORIUM, SAN FRANCISCO
Henery H. Gutterson, Architect

Exterior View 58
A Study in Modernism 59
Perspective 60
Garden Front 60
Reception Room 61
Auditorium 61
Sun Room 62
Library 63
Entrance Front 64
Main Floor Terrace 65
Porte Cochere 66
Living Room 67
Main Reception Room 68

SPAIN—A PORTFOLIO OF CAMERA SKETCHES BY LOTHAR C. MAURER—Doorways 69

Wood Termites 80
Pencil Sketch by Ralph J. Bishop 93
Alexander & Baldwin Building, Honolulu 78, 97
Dickey & Wood and C. W. Dickey, Architects

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The new Christian Science Benevolent Association Sanatorium in Arden Wood, San Francisco. Henry H. Gutterson is the architect; George Wagner, the general contractor.

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THE SHELL BUILDING AT NIGHT

Geo. W. Kelham, Architect
Gabriel Moulin, Photo

The Shell Building at San Francisco is admitted to be the best illuminated office structure in the world. The flood lighting equipment consists of 308 units with a total connected load of 232 kilowatts.

All flood lights are operated by remote control from a switchboard in the sub-basement. The illuminated shaft in golden amber is visible for many miles on a clear night, and presents a spectacle of enchanting beauty.

The ARCHITECT AND ENGINEER

VOLUME CII JULY, 1930 NUMBER ONE

THE SHELL BUILDING AT SAN FRANCISCO

By Hallam H. Anderson

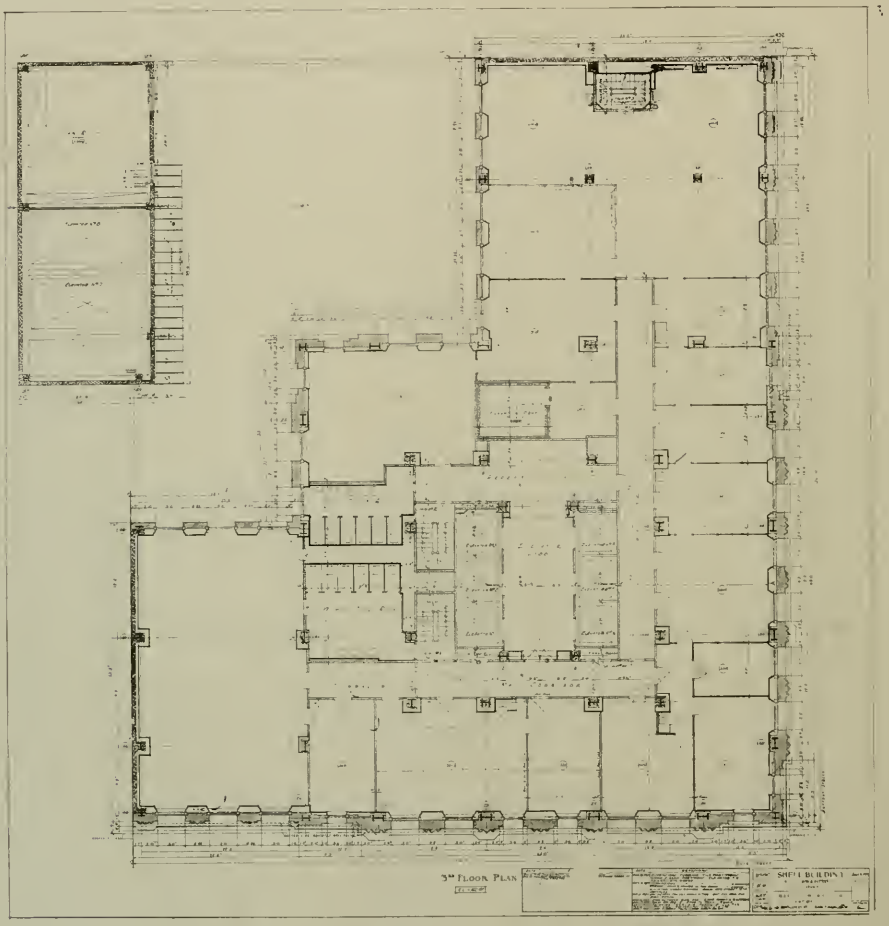
TO bay travelers, whether through early morning haze, under the rays of midday sun, or bathed in amber beams from innumerable floodlights, the Shell Building at San Francisco, with its fair shaft, radiates a gracious vitality — a quiet warmth — that quickens the senses to an appreciation of its charm. Here is a building, neither the tallest nor the largest on San Francisco's skyline, with a grace of form and fullness of color which already has won it distinction.

For sheer simplicity and beauty of mass, moderns have yet to improve on the obelisks of Egypt. Outstanding tower buildings of square section today reflect the mode of those antique pillars of Heliopolis. The Shell Building gives a first impression of inherent beauty because the mass is well contained within its tapered profile. From any angle the interest is satisfied by a precise sequence of unobtrusive set-back, starting from the pedestal and reaching to the pyramidal frustrum surfaces of the crown. The integrity of the ancient monoliths is recalled by the unusual solidity of reveal given to the vertical lines

PENCIL SKETCH, SHELL OIL BUILDING
Chas. E. Peterson

by contrast of the spandrels and piers, the latter heightened by the elongated ornament on their faces.

radiant crown through which the verticals extend to pierce the tapered surfaces at the parapet. Interposed on each face of the



THIRD FLOOR PLAN, SHELL BUILDING, SAN FRANCISCO

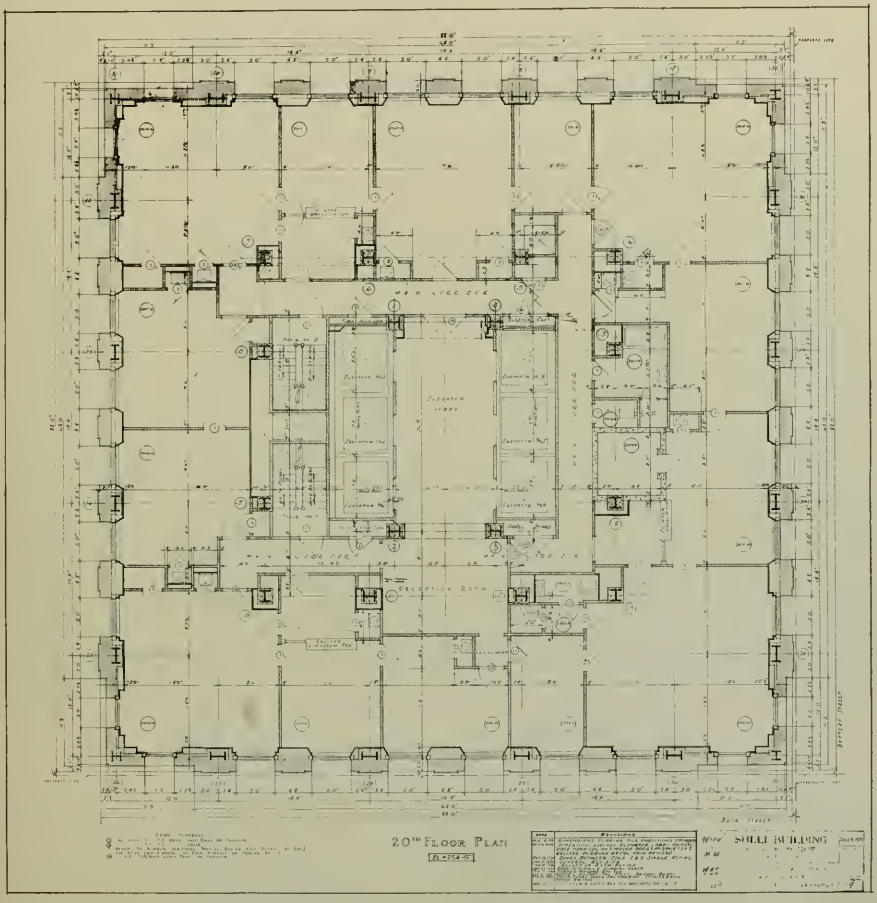
Geo. W. Kelham, Architect

At the twenty-eighth floor large projecting bowls play shadows across the pier surfaces below, serving not only to foil the strong vertical lines of the building, but also by contrast to intensify the interest in its

crown are three niches, the upper portions of which form shells. Stabilized by the bowls below, they serve alike as symbolism and to unify the terminals.

The bold surface of the sepia-tinted terra

cotta, covered with innumberable facets, lends unusual strength to the ornament. Of Egyptian ancestry with a modernistic bright metal to reflect the rays as if they were thrones of sunlight. The whimsical changes of decoration wrought by the play



TWENTIETH FLOOR PLAN, SHELL BUILDING, SAN FRANCISCO
Geo. W. Kelham, Architect

flare, this has been designed to respond, with highlight, shade and shadow, to the movement of the sun in a manner that suggests the artifice of the ancients who sheathed the pyramidions of their monuments in of light on the satin-textured surfaces give rest to the eye and pleasure to the senses.

From the street, attention is caught by the strong line at the third-floor belt course which defines the pedestal of the tall shaft.

SHELL BUILDING, SAN FRANCISCO

GEO. W. KELHAM, ARCHITECT

This pedestal assumes mass by the absence of vertical lines, and elevation by the high arch of the deeply revealed entrance—an effect which is accentuated by its rugged detail.

It was no mere happy accident that produced this fine proportion and simplicity of mass, line and color. Each element of dashed with coarse semi-transparent brown sand which changes hue by double reflection of the sun's rays as do the drops of water which produce the rainbow.

If the architect looked to the early monuments for fundamentals of exterior mass and line, he has adhered to the very inspiration of his ancient profession—the need for

Photo by Stroupe & Schreiner

AIRPLANE VIEW, SHELL BUILDING AND NEIGHBORING SKYSCRAPERS, SAN FRANCISCO

the treatment was first modeled to quarter scale and studied for profile and balance from every angle. Each unit of ornament was specially hand-textured to heighten its response to the changing light source. The quantity of ornament has been held to an effective minimum, but—where used—it is simple and massive, well calculated to retain its character while viewed from a distance. A perilous experiment was brought to fruitful conclusion by the introduction of cast concrete spandrels. These are painted neutral blue-green to harmonize with the reflection tone of the windows, and are a dwelling — in his treatment of the interior areas. Few monumental buildings with relative purity of exterior form are so intensely livable. The owners' symbol of welcome — the golden pecten — is exquisitely modeled to grace the delicate tracery of the high bronze entrance screen and the four swinging doors. The entrance lobby is a place of studied simplicity that creates initially the impression of cheerful warmth which pervades the public areas of the building. The walls are of polished Bottreville marble based on Verde Antique. The boldly detailed dome with its pendant lantern adds

Photo by Roger Sturtevant

DETAIL OF TOWER, SHELL BUILDING, SAN FRANCISCO

GEO. W. KELHAM, ARCHITECT

Photo by Roger Sturtevant

SHELL OFFICE BUILDING, SAN FRANCISCO

GEO. W. KELHAM, ARCHITECT

Photo by Roger Sturtevant *H. J. Brunnier, Structural Engineer*

SHELL OFFICE BUILDING, SAN FRANCISCO

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VESTIBULE CEILING AND LIGHTING FIXTURE, SHELL BUILDING
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Photo by L. C. Beringer

VESTIBULE, LOOKING OUT, SHELL BUILDING, SAN FRANCISCO

GEO. W. KELHAM, ARCHITECT

Photo by L. C. Beringer

MAIN ELEVATOR LOBBY, SHELL BUILDING, SAN FRANCISCO

GEO. W. KELHAM, ARCHITECT

ENTRANCE DETAIL, SHELL BUILDING, SAN FRANCISCO
Geo. W. Kelham, Architect

spaciousness to the lobby beyond actual dimension. Travertine, Bottreville and Verde Antique marbles form an interesting pattern with bronze in the floor. Two booths with bronze screens flank the lobby and arrest attention to its proportion and harmony.

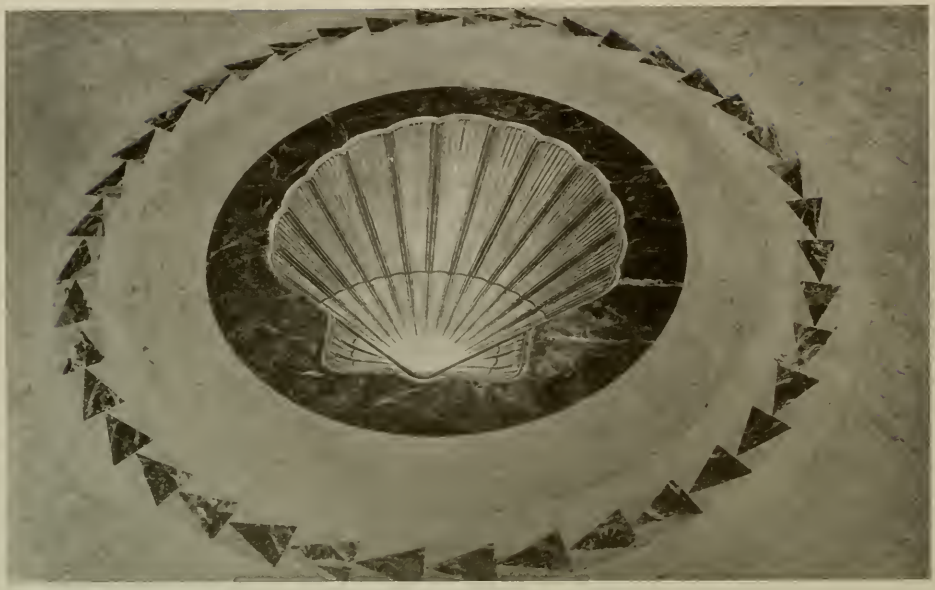
The same treatment of walls, ceiling and floor extends into the hall beyond where, to ceiling height in studied proportion of size and tapered reveal, stand the elevator fronts of cast bronze, boldly modeled, with lotus motif on the reveal and doors. On each screen appears a representation of a sunset on the ocean, significant of the owners' faith in this empire of the West. The indirect lights, which form an integral part of this decoration, function not only to strengthen the detail of the modeling, but also to illuminate the hall. Through a passage and steps at the rear of this hall, the 175-car garage may be conveniently reached.

With the opening of the heavy cast elevator doors appear the cabs, formed of sheet steel, with sharpness of fluting and panel. The rich bronze-sprayed finish of these cabs is extended to the hollow

metal front in the upper floor lobbies and serves to bond the interior color scheme. An informal touch is given to the front by the distinctive signal lanterns of bronze and Frink glass patterned on the pecten motif. The lobbies, each with an integral reception room, are treated with Travertine wainscot on black and gold base. The fronts are flanked with French Napoleon jambs which support a glazed dental course and simple cornice mold. Lobby and corridor floors are checkered, gold on black, and black on gold, rubber tile.

The owners' offices occupy seventeen floors. In the lobby and reception room of the twentieth floor, which houses the executive staff, the Travertine is carried to full height and the French Napoleon jambs are effectively fluted. The walls of the officials' rooms are paneled in canvas and cedar, glazed to suit individual tastes. The same treatment is used for the conference room on the twenty-second floor. This chamber, forty feet in length, is finished in cream and ivory tones. It holds a massive walnut table

DETAIL, ELEVATOR DOOR, SHELL BUILDING, SAN FRANCISCO
Geo. W. Kelham, Architect



INSIGNIA IN FLOOR OF LOBBY, SHELL BUILDING, SAN FRANCISCO
Geo. W. Kelham, Architect

VERTICAL VIEW OF TOWER, SHELL BUILDING
Geo. W. Kelham, Architect

and chairs to make a quiet retreat for twenty-four persons. The women's tea room on the third floor also reflects this restful homelike atmosphere.

Provision has been made to accommodate the ceaseless and complex flux of a large office organization with a minimum alteration of permanent facilities. Architecturally this is evidenced by almost a mile of movable partitions of Tanguile wood, handsome Adam brown in color, and "tapestry" glass to match the standing trim. These are used almost exclusively except for the executive floor. Mechanically it is accomplished by extensive use of electric underfloor duct, multiplicity of fixture outlets and plumbing stacks and flexibility of heat control. Every practical innovation for a modern business home has been included in the building's equipment.

An unusual public interest was first drawn to the work when its structural frame grew three stories each week. In a single week eight upper stories were enveloped

Interior Woodwork by Pacific Manufacturing Company

TYPICAL ELEVATOR LOBBY, SHELL BUILDING, SAN FRANCISCO
Geo. W. Kelham, Architect

with concrete. Terra cotta erection kept pace through inclement weather. Interior crafts followed simultaneously. This rapid erection, breaking all Coast records, was made possible through the splendid co-ordination effected by the builders organization among the craftsman, there being at the peak over eight hundred employed. Intensely pleased were the owners to be moved into their new home only ten months from the outset, when two world figures sped across an ocean and a continent to officially open this the tallest of Shell buildings.

Proud, indeed, must be the architect, to view from the placid bay the many fine structures he has contributed to the Metropolitan skyline. They vary in height and bulk, line and color, each an admirable composition in its own right—rich measures in the crescendo of his genius. With its scintillating shaft the plaything of sunlight by day, a pillar of amber at night, the Shell Building rises from their midst—prime piece—a sepia symphony!

DETAIL, UPPER STORY WING, SHELL BUILDING
Geo. W. Kelham, Architect

MECHANICAL AND ELECTRICAL EQUIPMENT OF THE SHELL BUILDING

By R. A. Hudson M.E.

THE new Shell Building at the northwest corner of Bush and Battery Streets, San Francisco, is one of the latest structures to be added to San Francisco's group of modern buildings. The main mechanical plant of the Shell Building is located in a sub basement thirty-two feet below the sidewalk, under the Bush and Battery corner.

In this space are located the boilers, feed water heater, pumps, water treating equipment and tanks. At a slightly higher level, in the same room, are placed the incinerator, vacuum sweeper and pneumatic tube machines, air compressors, circulating hot water heaters and the engineer's office. On a mezzanine balcony, over the Battery Street end of the mechanical plant, are located the ventilating fans for the boiler room.

The ventilating equipment for the garages, which occupy a considerable portion of the sub-basement, basement, first and mezzanine floors, is located adjacent to the garage elevator pent house. On the thirteenth floor are the toilet ventilating fan and water storage tanks for the low level water system. The service water heater is on the 28th floor.

On the 29th floor are located the drinking water cooling and purifying apparatus, the water tanks for the high level water system, one bank of transformers and the main elevator machines.

The boiler plant consists of three Consolidated Steel Corporation's high pressure water tube boilers which furnish steam for operating the main pumping equipment for the building as well as steam for heating. The climate of the city is such that some steam is required for heating practically every day of the year and there is constant use for steam for water heating. Accordingly steam driven pumps have been installed for pumping the water supply of the building and they are used, except at such times as no steam is required for any heating purpose. Standby electric pumps have been provided to pump the water at these times.

The heating system, installed by the James A. Nelson Company, is a two-pipe vacuum job with a steam main leading from the boiler room to the 28th floor where it is distributed by a horizontal main to down feed risers. There is a branch from the main riser at the tenth floor ceiling leading out to down feed risers in that portion of the building which is only ten stories high.

The heat in the building is automatically controlled by Johnson Service Company's room thermostats. In addition to the room thermostats, remote controlled air operated valves are installed so that any side, North, South, East or West may be shut off while steam is distributed to any of the remaining sides. These remote controlled valves are operated from air switches located on the gauge board in the boiler room.

All boiler feed water is deaerated in a deaerating feed water heater before it is delivered to the boiler in order to minimize corrosion due to entrained air and other

ENTRANCE TO GARAGE, SHELL BUILDING
Geo. W. Kelham, Architect

DETAIL OF FACADE, SHELL BUILDING
Geo. W. Kelham, Architect

gases in the boiler and piping of the heating system.

All steam piping in the building is Reading genuine wrought iron pipe. All return piping is iron pipe size copper pipe with 85% copper, brass fittings.

The water supply for the building is filtered through Cochrane conical sand filters and softened in zeolite softeners.

The cold water distribution system is divided into two levels, one level being from the tenth floor down, which is supplied from a tank located on the thirteenth floor. The part of the building above this level is supplied from tanks located on the 29th floor.

All hot water in the hot water system is heated in a deaerating heater located on the twenty-eighth floor. As this water is deaerated and heated under a vacuum, duplicate motor driven hot water pumps are installed at the heater to supply water under pressure to the three floors immediately below the heater. That part of the hot water systems below this level is supplied by a hot water main running from the deaerating heater to the boiler room where two recirculating heaters are installed. One of these heaters takes the full gravity pressure from the heater and reheats the water to maintain a circulation in that part of the system between the tenth and twenty fifth floors. The other recirculating heater takes its water supply from the same riser through a reducing pressure valve and supplies water and maintains the circulation in a separate system below the tenth floor.

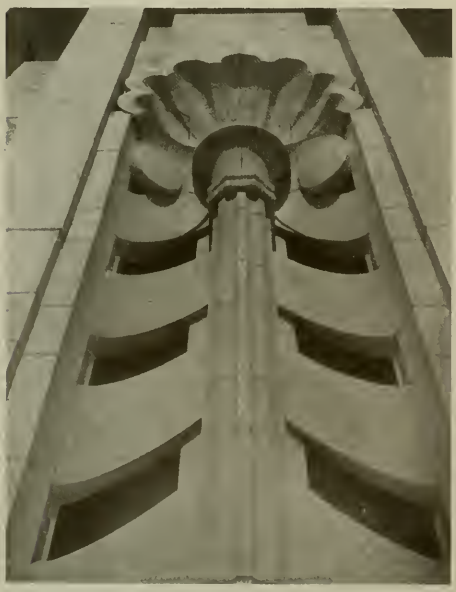
All cold water piping in the building is Reading galvanized genuine wrought iron pipe. The hot water piping is of iron pipe size copper.

Wrought iron pipe, two inches and smaller, in both the steam and cold water systems, is extra heavy thickness to insure long life against such corrosion as may occur in these lines.

The drinking water for the entire building is sterilized by being passed through an ozone sterilizer located on the twenty-ninth floor, after which it is cooled in a refrigerating plant, also on the twenty-ninth floor. This plant consists of twenty General Electric refrigerating units set in a cork in-

sulated tank made of welded stainless steel. The cooled drinking water circulation is also divided into two systems; that above the tenth floor being fed directly from the cooling tank with a forced circulation through it by a motor driven pump located on the twenty-ninth floor. Circulation is maintained in the lower system from the tenth floor downward by a motor driven pump placed on the thirteenth floor. On this floor is also located a balancing tank which receives water from the main cooling tank through a float valve.

The building is fitted with vacuum cleaner risers throughout, which make it possible to reach any part of the building from the risers with hose not over fifty feet in length. In the basement are located two turbine type vacuum cleaners each capable of operating ten sweepers simultaneously. These machines are connected into the same receiving tank and dust separator with automatic check valve in the suction to each machine. Thus one machine may be used separately or both may be used at the same time. The air from these machines is delivered into the main building smoke stack.



DETAIL OF SPANDREL, SHELL BUILDING
Geo. W. Kelham, Architect

Each of the garage floors is fitted with a complete Underwriters' sprinkler system, receiving its water supply directly from the water mains in the street.

The flushing system for the urinals in the building is controlled from the boiler room by an electric clock which may be set to give any desired frequency of flushing. A Johnson sylphon valve is installed in the water supply line to each group of urinals and the flush is controlled by the admission or release of air pressure to the sylphon valve under the control of the clock above mentioned.

The electrical distribution system, installed by Charles A. Langlais, is distinctly different from that ordinarily used in building work. A bank of three transformers is located in a transformer room on the twenty-ninth floor and a similar bank of transformers is located in a vault just outside the building under Battery Street. The secondaries of these transformers are tied in to a three phase, four wire bus system which extends from one transformer bank to the other. These busses consist of extra heavy three inch copper pipe. Where the secondary from the Battery Street transformers enters the building it passes through a network protector which will open under extreme overload or reverse current. The secondary from the transformers on the twenty-ninth floor is connected to the top of the busses through a similar network protector. This system affords a three phase, four wire distribution with 120 volts single phase for lighting and three phase, 208 volts for power.

The vertical riser of this secondary bus system is divided at its center, the top half being hung from the twenty-ninth floor and the bottom half being supported from the sub-basement. In the center of each bus is located an expansion joint. These joints consist of a clamp on each section of the riser with a number of flexible cables connecting the clamps. The joints in the busses are made of heavy cast bronze couplings, eight inches long with parallel threads into which the threaded ends of the pipe busses are screwed.

This type of system is very flexible and almost eliminates the ordinary type of feeder system in a building of this character. The load on each floor is taken off the secondary busses by bus taps directly to the panel boards which are immediately adjacent to the bus housing. There is no real main switchboard in the building. The switchboard in the sub-basement has only those switches necessary for the distribution of power to the motors in the basement. There is a similar switchboard on the twenty-ninth floor for the distribution of power to the elevator motors and other small motors on that floor.

The secondary busses are enclosed in a housing made of ¼" thick ebony asbestos wood with angle iron corners. This housing extends from the sub-basement to the twenty-ninth floor in a vertical shaft and in the sub-basement from the base of this shaft to the network protector behind the switchboard. There is a similar housing around the horizontal busses on the 28th floor from the top of the vertical bus housing to a point directly under the transformer vault on the twenty-ninth floor.

The primary feeder from the sub-basement bank on the twenty-ninth floor is a four-conductor number 00 rubber insulated steel armored cable. This cable is supported by the wires forming its own armor from a single hanger on the twenty-eighth floor. Just below this hanger the cable is served with heavy wire to prevent the unwinding of the armor wires below this point. The hanger consists of three heavy steel flanges with each armored wire being brought out between the lower and middle flanges and back between the middle and upper flanges, and the flanges clamped together with heavy bolts. The length of cable supported in this clamp is approximately 380 feet and it weighs some 10,000 lbs. The cable is insulated for 15,000 volts and was supplied by the Okonite Company.

This primary cable enters the building through an oil switch remote controlled from a push button on the sub-basement switchboard. There is also a push button on the switchboard controlling a tripping device on the network protector of the incoming secondary bus. Each of these push buttons is under glass, but it is possible through their use to isolate the entire building from the electric service.

The transformers in the Battery Street vault and those in the top of the building are connected on their primary side to different sub stations of the Pacific Gas & Electric Company which insures continuous power to the building through one or the other bank unless there is a serious system outage.

The lighting panel boards in the building are made up of small single pole Westinghouse circuit breakers, instead of the usual switches and fuses.

Provision is made for the distribution of telephone and signal wires and wires for convenience outlets, through all floors of the building by the installation of underfloor duct with preset inserts which in general consists of two parallel ducts, each pair being spaced approximately eleven feet from the next pair, with junction boxes at all intersections. A liberal system of con-

DETAIL OF TOWER PARAPET, SHELL BUILDING
Geo. W. Kelham, Architect

duit feeders are run to these junction boxes from the telephone terminals at the telephone riser shaft and from the lighting panel boards.

The building is also provided with a pneumatic tube system with stations on all office floors. The compressors for operating this system are located in the main machinery room of the sub-basement, the central station being on the second floor. All vertical distribution of mail, inter-office correspondence and dictaphone records may be handled through this tube system. The horizontal distribution is handled by hall boy attendants whose desks are located at each individual floor station.

As the building is a symmetrical tower and widely separated from other buildings it was a subject particularly adapted to flood lighting. Its exterior color and finish was also very favorable to this form of illumination. Flood lighting equipment was accordingly installed for completely lighting the building. Each side of the main shaft of the building is lighted by a bank of twenty-eight 1,000 watt General Electric flood lights situated either on the extended roofs of the Shell Building to the North and West, or on the buildings across the streets on the East and South. Additional projectors are located at the inset corners of the building at the twenty-first floor and in the set-back entirely surrounding the building at the twenty-third floor. Still more projectors are placed in the shells and in the set-back on the twenty-eighth floor. There are also four 1,000 watt projectors on the tower roof for illuminating the flag. Each flood light, with the exception of the ones for lighting the flag, is equipped with a light golden amber color screen set inside of the lens of the projector. The resulting illumination is a pleasing golden color from nearby vantage points and a lighted shaft which commands attention from such points as Twin Peaks, Sausalito, and the Oakland side of San Francisco Bay.

FLAG RAISING, SHELL BUILDING, SAN FRANCISCO
April 16, 1930

REGULATION OF HIGH BUILDING DESIGN

By H. C. Allen

IN presenting architects' views on this question, it must first be made clear that this is not an individual opinion, but a compiling of quotations—a sort of architectural Literary Digest. The profession is by no means unanimous. Many architects, and among them men of wide experience in city building, believe that heights and bulks should be subject to regulations devised to protect both public welfare and private property interests.

There are some few enthusiasts who object to any control beyond fire protection and structural safety. Probably the majority believe that heights should be rigidly restricted, as in London and Paris; in Los Angeles, by a majority vote last January in the American Institute Chapter, architects approved the present city limit of one hundred and fifty feet; but it may be pointed out that most of us do not have occasion to build skyscrapers, and are therefore not really familiar with the economic and financial conditions which are producing them.

These conditions are so pressing that they cannot be disregarded. "Monster cities and monster buildings are already here. They are being built by forces not yet under control. . . . The task is to subdue them . . . so that they will not crush the people they are meant to express and serve. . . . We cannot safely entrust our future to cities which are dangerous and inconvenient, nor to cities which outrage some enduring principle in our own human nature."

There can be no denying the fact that architects are vitally concerned. "The progress of civilization leaves its permanent record in architecture. The activities of a people, their religion, their culture, their scientific and mechanical achievements, their business, and their home life, all leave a definite impression in the style of their building construction." "Our estimate of the civilizations which have preceded us is based largely upon the quality of the architecture which they produced, and on the same basis we shall be judged by the generations which follow."

The practice of architecture can be divided broadly into two main departments; the esthetic, dealing with appearance, or design; and the practical, embracing construction, cost, legal protection, health and safety, comfort and convenience, suitability and efficiency. So pertinent to this discussion are the practical subjects of engineering, finance and law, that they are taken up separately by special experts who can doubtless explain them with fourteen hundred dollar words, as Floyd Gibbons says.

The matter of most concern to the public is that of health; the fundamental importance of light and air. As has already been brought out, scientists and physicians have long recognized the theapeutic value of sunlight, and particularly of the ultra-violet rays of the sun. The effect has been found to be both curative and preventive, sunshine affecting, it has been proved, the amount of hemoglobin and causing a measurable increase of red blood cells. Metabolism is improved due to more oxygen in the blood. In many of our narrow business streets, filled with high buildings, no ray of sunshine enters the lower floors, or even re-

A paper read before the Commonwealth Club, San Francisco.

flected light from the sky. Men are doomed to work in offices artificially lighted, with air stifled by the towering walls about them. "A few scattered skyscrapers first stole the light and air of their lowly neighbors, and took more than their share of human use of the adjacent streets. Then a few more came, like chickens in a barnyard racing after the chicken that has just obtained a choice bit —to share in the bit. Then they came in flocks. And then came the subways to serve them; and now—'Watch your step!' "

The harmful effect upon health is, of course, worse when high buildings are used for living quarters, occupied both day and night, than when used only for the average seven or eight working hours as usual for office and other commercial buildings. Unquestionably, "all living quarters should be exposed during at least a portion of the day to the play of direct sunlight. It should be possible to determine minimum requirements for courts and window sizes by the minimum healthful standards of sunlight penetration. It is therefore a sound public health policy to impose restrictions as to height and bulk which are more stringent in the case of residential than in the case of office buildings." Walls should be kept as far as possible away from rear lot lines. "It is wise, also, to require setbacks on side lot lines, to prevent the erection of a solid row likely to shut off sunlight from buildings on the northern side of such a row. There is great advantage in retaining openings between buildings through which it is possible for sunlight to penetrate."

Regulation of residential skyscrapers may not seem important or necessary to us at present, but it is really closely allied to the problem of commercial buildings. For in a great city, "there is need for the reservation of residential zones in proximity to manufacturing and mercantile districts. . . . By such provisions the city's transportation burden may be lightened. . . . Furthermore, assessments and taxation must be so equitably adjusted that the assessed values and the resulting taxes upon residential properties will not be disproportionate to the rents that can be charged. Land values established at a lower level are essential for low rental rates. Here is a clear case where it is necessary for zoning regulations to set aside areas where residence values may become stabilized. This will tend to check the speculative exchange of land in certain sections, but the stabilization of the income should compensate for this.

Tall buildings can rarely be seen adequately except from a distance. Whether treated as towers or as pyramids, they must have space about them, to be beautiful. "Under present conditions, city buildings are jammed together, distorted, box like, ugly. What has become of architecture as an art of three dimensions? The architect is a mere surface decorator—a beauty specialist who 'lifts the faces' of buildings.

"Regulation (of spacing, bulk and height) will bring architecture back into city buildings." "There is a growing public demand for a more scientific co-ordination of buildings, one with another, and with the city plan." "It is just as unreasonable to ask that a tall building be allowed on a narrow lot as that an automobile be run on the sidewalk!" "The ideal condition involves spacing between structures equal to twice their average height."

New York is the terrible example—a marvel and a menace. Yet it is a strange and interesting fact that the one attempt to regulate heights in New York, generally known as the Setback Law, brought about the one contribution America has made to the world's architecture—the first really new style in seven hundred years.

"Architecture grows out of the physical and spiritual needs of humanity, and while these needs change, they never are completely overthrown, but rather are the new needs woven into the woof of the older. . . . Architecture is neither the structure, nor the skin that forms the covering, but is a balance between them and the requirements of man. . . . (It) becomes, if creative, something akin to a series of fresh viewpoints through which the individuality of the designer and the times in which he lives, are expressed."

From the various opinions herein collected and presented, all the results of serious thinking by thoroughly experienced men, it must be accepted that from the architect's point of view, regulations as to building bulks and heights are not only desirable, but are vitally necessary, and in fact inevitable. But it is not a problem which can be turned over to politicians, amateurs or inexperienced theorists. There is need for a getting together of experts in the several different lines. "Our civilization has developed to such a point today that the directing forces have outgrown the mental concept of individuals of different training, however, the group concept can be carried much further, and the forces in our social system with which the individual alone is unable to cope, may be controlled and directed by an intelligent group leadership. The solution of the problem will be dependent on such co-operation."

INSTITUTE DISCUSSES "MODERNISM"

WHILE the whole field of contemporary architecture was covered in the proceedings of the last A. I. A. convention, "Modernism" was the leading theme of a Forum arranged by Charles Butler of New York, which occupied the opening sessions with Louis La Beaume of St. Louis presiding.

The general architecture of the nation is "incoherent and formless," George Howe, of Philadelphia, declared in defense of the modern tendencies.

"Without a basis of technique, all our efforts have lacked direction," Mr. Howe said. "The modern movement is a conscious effort to direct and canalize the stupendous energy of modern civilization between its proper architectural embankments.

"The traditionalist argues as though all buildings produced by traditionalism were beautiful, whereas it is apparent to all that an overwhelming majority is ramshackle, sentimental, pretentious, dishonest and ugly. If we compare the average of all types, good and bad, that show any conscious design, from the skyscraper, church and palace to the industrial plant, filling station and row of workmen's houses, the modernist product will win hands down on the score of soundness, reality, simplicity and honesty."

C. Howard Walker of Boston, spokesman for the conservatives, asserted that the modernists could not escape the past.

"It has been reserved for the so-called modernists," he said, " to be irritated at any resemblance to anything that has calm, and to adore excess in every direction; to be shapeless, crude, eliminated in detail to nothingness, explosive in detail to chaos, and to create sensation with the slapstick and the bludgeon.

"Modernism may change the methods of architecture, but when it does it will necessarily have in it traditions of sound previous methods, with which at present it is in conflict. It is now at times infantile, and has growing pains. Occasionally it reaches a serious adult stage. Therefore Hope is struggling at the bottom of the open Pandora's Box."

Photo by Morton & Co.

CHRISTIAN SCIENCE SANATORIUM, SAN FRANCISCO

HENRY H. GUTTERSON, ARCHITECT

A CHRISTIAN SCIENCE SANATORIUM

by

John Bakewell, Jr.

IN looking at any building critically we always derive the greatest pleasure if the architectural idea is easily discovered and forms the basis of the artistic conception.

Henry Gutterson, the architect of the Sanatorium at San Francisco for the Christian Science Benevolent Association, Pacific Coast, has succeeded in producing an effect that does this in a very striking manner. The building is placed in a grove of splendid Eucalyptus trees and has taken its idea from its setting. For this reason a word should be devoted to the site itself, a wooded hillside sloping rather abruptly toward the southeast. A good deal of study and scheming must have been necessary to surmount the apparent difficulties of this terrain.

Mr. Gutterson has reached a solution of all these difficulties and has, as is often the case, converted seeming difficulties into very real advantages. We imagine that the very fact that serious thought and study were required to thoroughly understand the site and its possibilities, had much to do with the originality and frankness of the architectural idea finally adopted. We use the word originality advisedly, for though the building is conceived and treated in a traditional style of architecture, it is a style that is not often used here in California and its use required courage, and a conviction that it was peculiarly adapted to the unusual conditions not only of the program but also of the immediate surroundings.

A STUDY IN MODERNISM
Photo by Morton & Co.

The heavy growth of towering trees running down the hillside into a ravine gave seclusion and a very restful sense of having gotten out of the world for a moment. As the purpose of the building is to achieve this very thing, it became quite essential that the seclusion and peacefulness of the place should not be disturbed but that full advantage should be taken of these natural characteristics.

There was a certain danger of gloom and loneliness in this wild setting in the shadow of trees and hillside that had to be overcome, so that it was necessary to preserve certain qualities and to lighten and cheer others. Apart from these sentimental questions, there were also the conditions of the terrain. The physical difficulty presented by the steep slope and by

PERSPECTIVE, CHRISTIAN SCIENCE SANATORIUM, SAN FRANCISCO
Henry H. Gutterson, Architect

GARDEN FRONT, CHRISTIAN SCIENCE SANATORIUM, SAN FRANCISCO
Henry H. Gutterson, Architect

the necessity of respecting the natural contours, if the forest was to be preserved.

The architect has included all of these natural conditions as a part of his program; has, in fact, made them just as determinate as the requirements presented by the necessary spaces and arrangements of the building itself. The building has been planned to fit into the contours of the hillside and has been composed and proportioned to be in perfect harmony with its site and surroundings.

It rises up from the midst of the grove to a height which gives an extended view from the upper stories out over the trees down the valley and to the sea. As the hillside slopes away rapidly from the entrance front to the terraces in the rear, the back or rather the terrace front rises up well above the trees and the open space given up to paved and gardened terraces brings sun and cheer into even the lowest rooms on this front. In the placing of the living rooms of the lower floors, Mr. Gutterson has evidently had this in mind.

The general shape of the plan is of interest. The main body of the building terminates at each end in two wings, like two Ys placed end to end. On this particular site this plan works out admirably, conforming to the contours and giving a picturesque mass. Owing to the abruptness of the contours an H shaped plan would have given wings at the two ends running into the hill on the upper side and down many stories on the lower side. Yet an H shaped plan with double wings had decided advantages—shortening circulations and condensing the building. By bending the two sides of the H toward the contours, Mr. Gutterson has been able to avail himself of the condensed plan without conflicting too much with the contours. The result is very successful and pleasing.

In the composition used and the treatment chosen, the same influence of the site is apparent. The height and mass of the building are in the scale of the forest, and the free, easy handling of masses

RECEPTION ROOM BAY, CHRISTIAN SCIENCE SANATORIUM, SAN FRANCISCO

AUDITORIUM, CHRISTIAN SCIENCE SANATORIUM SAN FRANCISCO

and of functional features is very appropriate. The porte cochere, a useful and necessary feature, forms a means of accentuating the main entrance; the auditorium marked by its large high windows becomes an important part of the composition, as do the stair towers, while less dominant necessities or conveniences such as balconies, dormers, terraces and loggias, each perform their service in lending interest and variety.

SUN ROOM, CHRISTIAN SCIENCE SANITORIUM, SAN FRANCISCO
Henry H. Gutterson, Architect

To get the full advantage of the finely composed and picturesque masses, the style of the French Chateaus has been selected for the treatment. The program called for a building which in sentiment and in use resembles rather a great home than a hotel or a hospital and yet must of necessity contain within it certain features which we associate with hotels and hospitals.

Mr. Gutterson, after careful consideration of precedents in dwellings of this great size, chose the French Chateau type because of its simple and ample fenestration, and because the steep roof seemed most fitting in the high wooded site. The steep roof used made it possible to provide for the possibility of adding future rooms in the roof space to care for anticipated growth. The choice was well made as no style could fit in better with the forest setting. The building, in spite of its great size and mass, remains essentially domestic.

The exterior walls are of concrete which is left with no other finish than a stain of cement wash. As the forms were tightly and accurately built and great care taken in the pouring of concrete, the surfaces are regular and yet give the feeling of solidity and strength. The slight irregularities are softened by the warmly toned wash and give a pleasing natural texture.

The steep roof is covered with red tile

shingles that give a bright but harmonious contrast to the grayish green foliage of the trees.

The surfaces of walls are broken by the windows with their renaissance frames, and the roof is lightened and given interest by the dormers and chimneys.

The detail of the exterior which makes use of renaissance motives and ornament, phones, etc., placed near the entrance, are readily accessible and easily found without obtruding so much as to suggest a hotel. As one enters the lobby he looks directly into the reception room, catching glimpses of the woods beyond through the great bay window. Opening off the lobby are also the accessories, two small reception rooms for intimate conversation, and the offices of

LIBRARY, CHRISTIAN SCIENCE AUDITORIUM, SAN FRANCISCO
Henry H. Gutterson, Architect

opens the way for the introduction of several periods of French furniture within. Mrs. Vernita Seeley, as interior decorator, assisted by Miss Helen Gatch, with the cooperation of a sympathetic furnishing committee, has succeeded in bringing out the fine details and proportions and in accentuating the homelike aspect of the rooms. The furnishings are in modified Empire and Directoire styles.

The interior spaces open up well and the accessories, such as information desks, tele- the administration staff. Access is also had to the elevators and stairways. Passing on one comes to the auditorium, a very stately room featured by high impressive windows and equipped for services, lectures and concerts.

The fifth floor is featured very appropriately, as there is a fine view from this floor and it has an unusually warm and sunny exposure. The living room and an adjoining sun room take full advantage of this fact.

ENTRANCE FRONT, CHRISTIAN SCIENCE SANATORIUM, SAN FRANCISCO

HENRY H. GUTTERSON, ARCHITECT

MAIN FLOOR TERRACE, CHRISTIAN SCIENCE SANATORIUM, SAN FRANCISCO

HENRY H. GUTTERSON, ARCHITECT

PORTE COCHERE, CHRISTIAN SCIENCE SANATORIUM, SAN FRANCISCO

HENRY H. GUTTERSON, ARCHITECT

Interior Woodwork by Pacific Manufacturing Company

LIVING ROOM, CHRISTIAN SCIENCE SANATORIUM, SAN FRANCISCO

HENRY H. GUTTERSON, ARCHITECT

The dining rooms are placed on a lower floor in close proximity to the dining room services and the service arrangements on these lower floors are complete and conveniently arranged.

Passing up to the bedroom stories there are many practical features worked out to make these rooms comfortable and pleasant.

Mrs. Helen Van Pelt, as landscape architect, has tamed the forest and converted it into a park in the immediate vicinity of the building. The base planting has been done with fine feeling with beautiful specimens of well selected trees and shrubs. The slopes down into the water garden in the ravine to the South are allowed to become wilder with good rock work and well placed pools at the lower levels.

MAIN RECEPTION ROOM, CHRISTIAN SCIENCE SANITORIUM, SAN FRANCISCO

SPAIN

A Portfolio of Camera Sketches

by Lothar C. Maurer

I. *Doorways*

DOORWAY, ECIJA

CARMONA

ENTRANCE DETAIL, VILLAGE NEAR TRUJILLO

RONDA

SEGOVIA

Courtesy Gladding, McBean & Co.

ALEXANDER & BALDWIN BUILDING, HONOLULU

DICKEY & WOOD AND C. W. DICKEY, ARCHITECTS

HOW TO COMBAT THE DAMP-WOOD TERMITE

By S. F. Light, S. P. Koch and E. E. Bowe

THE Damp-Wood or Rotten-Wood termites (Termopsis) are the large termites (Figs. 1-4) commonly found throughout the coastal region of California, Oregon, and Washington, and in all the moister mountain regions up to 9,000 feet or more as far inland as Montana and Nevada. Their greatest natural reservoir is the down wood, dead stumps and stubs, and dead portions of living trees in our forests. Smaller reservoirs are in the canyons of the less heavily wooded and more thickly populated areas. From these they have spread by means of the annual swarmings to buildings, pilings and other structures so situated as to furnish them the conditions of abundant and continuous moisture necessary to their existence. Where these situations exist, the damp-wood termites may cause considerable damage and expense, as, for example, in the Berkeley fire house discussed below. Such conditions are relatively rare, generally present only in older buildings and may be easily avoided in new construction.

The Damp-Wood termites are wood-dwelling termites. The king and queen enter the wood attacked in the winged stage (Fig. 2) and the colony is confined thereto. They do not ordinarily enter the ground. They do, however, require an abundant and continuous supply of moisture such as is ordinarily found in wood only when it is in or on the ground in damp regions. Since these conditions are those favorable for fungus attack on wood, these termites are ordinarily found in decaying wood and were at first named Rotten-Wood termites (see Agricultural Experiment Station Circular 314). Since they commonly extend their attacks into sound wood and are even reported as colonizing sound wood if sufficiently damp, it has seemed best to call them Damp-Wood termites rather than Rotten-Wood termites. This name puts them also in the desired contrast to the Dry-Wood termites ("Sound-Wood" Termites). A typical case of attack by Dry-Wood termites was reported by Kofoid and Garland in the November issue of this journal. They also enter the wood attacked while in the winged state and confine their colony to it. They, however, need no special moisture supply, hence enter dry, sound wood and present consequently a more difficult problem than do the Damp-Wood termites.

The Damp-Wood termites, therefore, while in all ways more closely related to the Dry-Wood termites, yet because of their moisture needs, present an economic problem quite other than that of the Dry-Wood termites and one readily solved, save in rare cases, by the methods which should be universally resorted to, to prevent damage both by the Subterranean termites and by fungi.

The first rule is to keep all wood, unless standard treated, out of and off of the ground. This serves to eliminate moisture

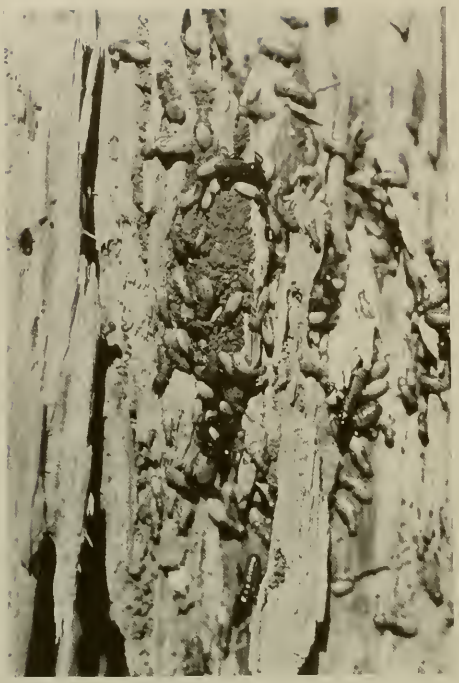


FIG. 1—ROTTEN WOOD TERMITES IN WOOD

FIG. 3—LARGE TERMITES

supply, so far as the Damp-Wood termites and fungi are concerned and has the additional advantage of reducing the danger of attack by Subterranean termites.

The second rule, which has in view the same end as the first, is to eliminate all extraneous sources of constant moisture supply, such as faucet drips, drip from eaves, etc., or to use only standard treated wood in such exposures, since such continually moist wood is very susceptible both to fungus attack and attack by the Damp-Wood termites. A very good example of this condition was presented in the exposed flooring of certain parts of the San Francisco Ferry Building where some two years ago numerous young colonies of Damp-Wood termites were found attacking both layers of heavy untreated flooring. Each of these colonies was clearly seen to have originated from a colonizing pair which had entered along the break in the wood made by a nail or spike, the break in the wood leaving a depression that allowed accumulation and entry of moisture and consequent fungus attack.

The case of attack presented below was particularly interesting in view of the fact that the pertinent facts were available and that simple and inexpensive preventive measures at the time of erection would have obviated the high replacement costs and probably would have considerably prolonged the life of the building.

The structure under discussion is a two story frame building (26′x68′) located on Emerson Street, a short distance east of Adeline Street in Berkeley, and was erected about twenty-five years ago at a cost of approximately $4,500. The interior is ceiled with tongue and groove boards, placed vertically on walls and partitions, and the exterior is sheathed and shingled in the customary manner. The foundations were of concrete and those for the enclosing walls were of sufficient height to permit the first floor joists to be set directly on the sills. The studding for the exterior walls rested on a bottom plate placed on top of the floor joists and the general construction of the

building conformed to common practice for frame buildings.

One detail of good construction was, however, disregarded in this building, as has been true unfortunately in many other instances; that is that the exterior foundations of frame buildings should never terminate below the finished grade (Fig. 5). In this particular instance, it has been impossible to determine whether this detail was disregarded at the time the building was constructed or the grade raised at a later date, but the fact remains that the top of the exterior foundations was from one to two feet below the ground adjacent to the building.

This condition in itself was sufficient to afford the necessary moisture suply for the Damp-Wood termite but it is possible that the washing of the floors at frequent intervals was an additional factor. That conditions in this building were ideal for the Damp-Wood termite is evidenced by the extent of their infestation which can be visualized from the following description of the damage:

The 2x8 untreated sills had been destroyed for practically the entire distance around the building and in some places had collapsed to considerably less than an inch in thickness. The outer ends of the joists on either side of the building were either partially or entirely destroyed for two or three feet of their length except over the basement at the rear of the building and for a considerable distance on one side of the building the joists had been crushed to less than one-half their original depth of twelve inches. The lower ends of the studding were, with very few exceptions, found to be damaged for a distance of from four to eight inches above the floor, this distance depending upon the adjoining ground level. The floor was also found to be infested close to the outer walls and towards the front

FIG. 2—TERMITE IN WINGED STAGE

FIG. 4—ROTTEN WOOD TERMITES

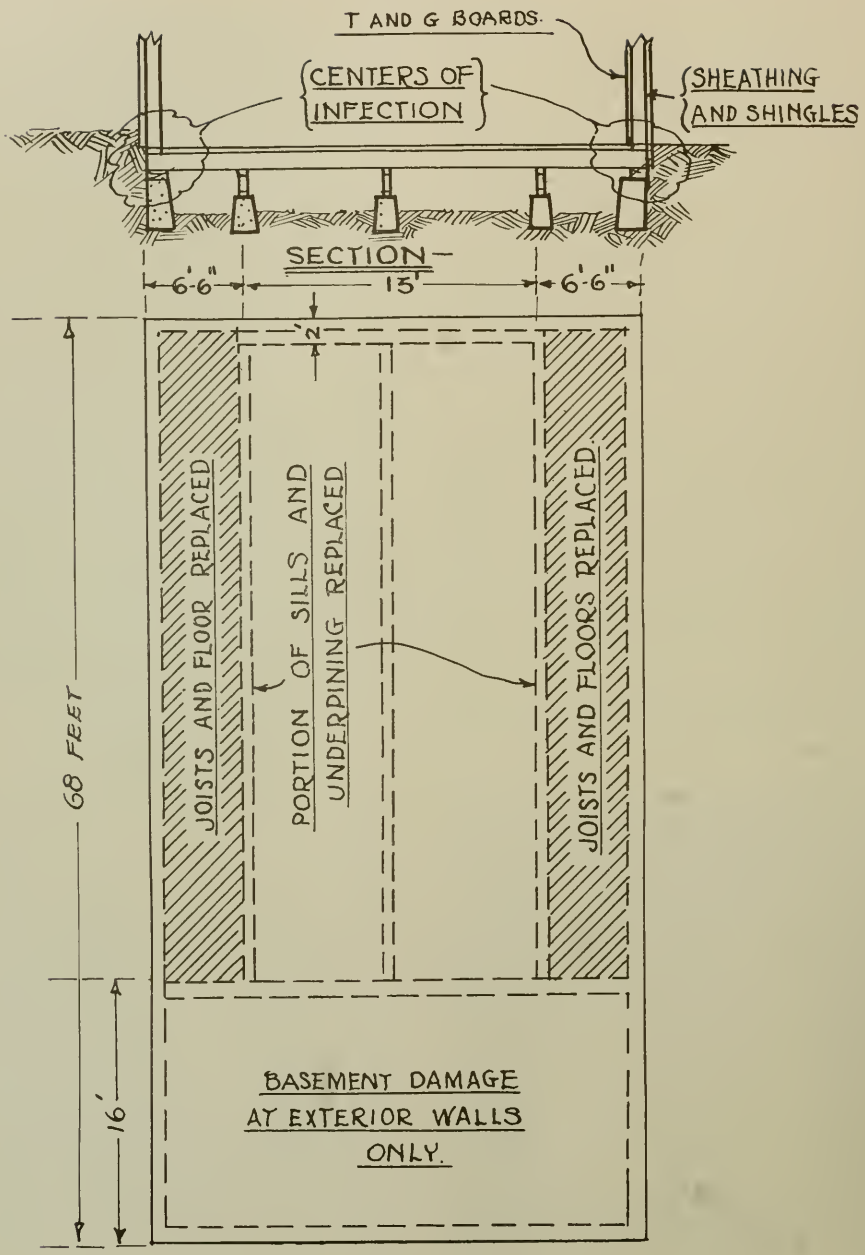

T AND G BOARDS
CENTERS OF INFECTION
SHEATHING AND SHINGLES
SECTION
6'-6"
15'
6'-6"
2'
JOISTS AND FLOOR REPLACED
PORTION OF SILLS AND UNDERPINING REPLACED
JOISTS AND FLOORS REPLACED
68 FEET
16'
BASEMENT DAMAGE AT EXTERIOR WALLS ONLY.

FIG. 5—PLAN

of the building where there was practically no ventilation under the floor. In a number of places the lower ends of the tongue and groove boards had been destroyed to such an extent that the paint was all that remained (Fig. 5).

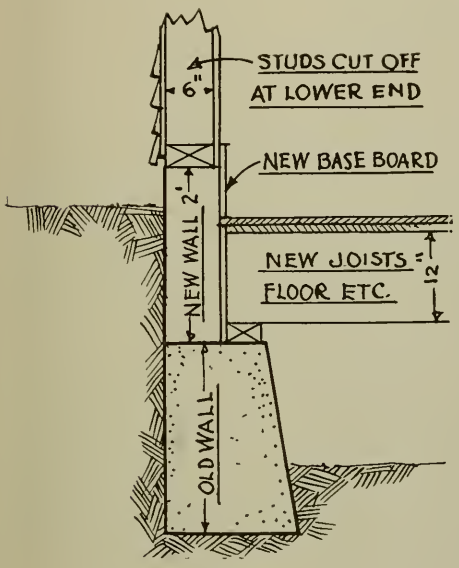


FIG. 6

The cost of repairs was approximately $950 and the repair work involved the raising of the exterior foundation, replacement of joists and floors on either side of the building and cutting off the lower part of the exterior walls (Fig. 6). This repair cost could easily have been avoided by not filling in around the building or by an expenditure of $30.00 or $40.00 for additional foundation work at the time the building was constructed.

In this particular case the pound of cure cost considerably more than the ounce of prevention, the repairs amounting to more than twenty percent of the original cost of the building, whereas proper construction would not have added more than one percent to the cost of the building.

INSTITUTE CENSORS BILLBOARD

THE invasion of the gas station and roadside house into suburbs and along main highways has done irreparable injury to towns and countryside, it was declared in a report of the Committee on Preservation of Historic Monuments and Natural Resources, at the recent A. I. A. convention. The committee urged zoning as a method of billboard control, deriving from Federal authority.

"There will always be abundant room for outdoor advertising in its proper place, but that proper place is the commercial districts of towns and cities, and not the American countryside," it asserted. "The crux of the billboard question is whether the rights of the American public shall be recognized as opposed to the rights of advertising interests.

"This committee is co-operating with organizations seeking a wise control of billboards. A decision has been sought from the Federal Supreme Court, by active interests in Massachusetts, whether or not outdoor advertising on private property within the public view can be regulated and restricted by law under the Constitution of the United States. The Massachusetts case, now awaiting decision, will prove a precedent for all states."

Prof. William Emerson of Boston has been appointed to represent the Institute on the Massachusetts Billboard Law Defense Committee. He is head of the Department of Architecture in the Massachusetts Institute of Technology.

PORTLAND FEDERAL BUILDING

Morris H. Whitehouse and Associates, architects of Portland, Oregon, have been commissioned to prepare plans for the proposed new United States Postoffice and Federal Courts Building at Portland, according to word from Washington, D. C. The cost of the structure is to be approximately $1,237,500.

ACOUSTICS OF SOUND MOTION PICTURE THEATERS

By Keith Friend

THE purpose of this article is to throw more light on the subject of acoustics as it is related to the sound motion picture theater, by showing how the acoustical properties are determined, the factors involved and how the proper corrections are applied.

Before the advent of the talking picture, little thought was given to acoustics of picture theaters. Consequently, since the establishment of the "talkies," many theater operators have found their houses inadequate acoustically for the satisfactory projection of sound.

The acoustical properties of the theater itself must be considered independently from the sound projecting equipment. For the sake of this discussion, the projecting equipment will be assumed to be performing perfectly and attention will be directed to the acoustics of the theater itself.

In a previous article in this magazine the common acoustical faults were set forth as being improper distribution of sound energy within the room and excessive reverberation or the continuance of the sound for too long a time before becoming inaudible. There are other factors affecting acoustics in general but these are largely overcome in the case of reproduced sound in theaters through the ability of the operator to increase the loudness of the sound over that of ordinary speech.

In the previous article, the factors surrounding faulty distribution of sound energy in a room were enumerated and their correction or means of prevention set forth. Fortunately, cases of objectionable sound distribution are comparatively few in number, the larger portion of acoustical trouble being excessive reverberation. In the few cases of acoustical correction of sound theaters which do happen to involve other outstanding faults in addition to excessive reverberation, the reduction of the reverberation period does much to mitigate the other difficulties. The reverberation period may be termed the key to the hearing conditions, the hearing conditions improving with the reduction of this period.

The optimum or satisfactory reverberation period is the time allowance for reverberation consistent with good hearing for the particular room in mind. The optimum reverberation period varies according to the volume of the room. The larger the room, the longer the reverberation time can be without interfering with satisfactory hearing.

Typical Theater Analysis

In order to make an acoustical analysis, it is not necessary to see the theater, unless the room possesses some unusual features, providing a complete set of architect's plans can be obtained. Sabine's formula for computing the reverberation period, it will be remembered, holds the following relation:

$$t = \frac{.05\ V}{a}$$

where: t = the reverberation time in seconds
v = volume of room in cubic feet
a = total units of absorption in room

Assume, for the purpose of illustration, a typical motion picture theater, the plan and elevation sketch of which are shown in Figure 1.

The main floor and balcony floor will be assumed to be concrete with carpeted aisles and the total seating capacity to be 1500.

The stage floor will be varnished wood, the walls partly hard plaster and partly glass, and the ceiling flat and finished with hard plaster.

The factors effecting the good distribution of sound energy have been set forth previously and it is seen that this room complies favorably with these requirements so it can be safely predicted that the distribution will be satisfactory. The problem then resolves itself into one of excessive reverberation. The calculation of the reverberation periods follows.

It will be remembered that the total absorption of the room is the sum of the absorption furnished by the various kinds of surfaces and furnishings in the room. The areas of the various materials are found and multiplied by their absorption coefficients. Coefficients of sound absorption have been determined for most materials of construction. These coefficients are expressed in terms of the amount of absorption the materials possess per sq. ft. compared to 1 sq. ft. of open window which is accepted as the unit and is said to be 100% absorptive and thus have a coefficient of one. The sound absorption coefficients for common materials are given in Table I.

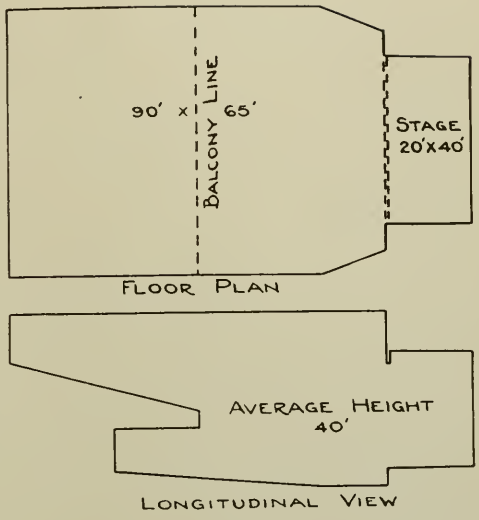


FIG. 1

Table I

COEFFICIENTS OF ABSORPTION

The following coefficients are taken from the published works and test data of the late Professor Wallace C. Sabine, of Harvard University, Professor F. R. Watson and Bureau of Standards. They are for the standard pitch of 512 vibrations per second.

	Units per sq. ft.
Open Window	1.00
Plaster, Hardwall or Stucco	.025 to .034
Concrete	.015
Brick set in Portland Cement	.025
Marble	.01
Glass, single thickness	.027
Wood Sheathing	.061
Wood, varnished	.03
Cork Tile	.03
Linoleum	.03
Carpets, overpadding	.15 to .29
Cretonne Cloth	.15
Curtains in heavy folds, lined	.50 to 1.00
Hairfelt ½"	.31

FIG. 2

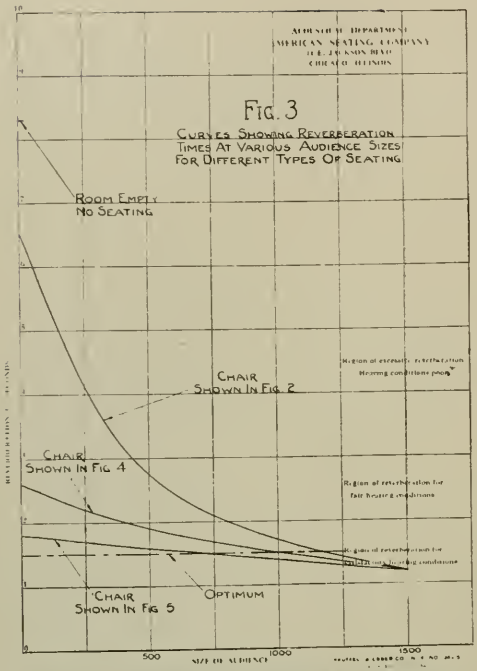


FIG. 3—BELOW FIG. 4

Hairfelt 1″	.59
Flaxlinum ½″	.34
Flaxlinum 1″	.55
Acousti-Celotex, Type BB, painted or unpainted	.70
Acousti-Celotex, Type B, painted or unpainted	.47
Guastavino Acoustolith plaster ½″ thick	.32
California Stucco Co. Acoustic plaster ½″ thick	.21

Individual Objects

	Units
Audience per person	4.7
Plain Church Pews per linear ft.	.18
Upholstered Church Pews per linear ft.	up to 1.6
Plain Plywood Auditorium Chairs	.24
Upholstered Theater Chairs, average	1.6+

In case of chairs or other individual objects where it is difficult to find their area and express the absorption in terms of a coefficient per sq. ft., it will be noticed that the absorption of the object is expressed in units. For instance, a chair may possess three units of absorption, which means it is equivalent to 3 sq. ft. of open window in absorptive power.

The computations for the absorption of the empty room, shown in Figure 1, is given as follows:

Balcony and Main Floors	10400 sq. ft. Concrete @ .015	= 156
Stage Floor	800 sq. ft. Wood @ .03	= 24
Ceiling and Walls	23500 sq. ft. Plaster and glass @ .03	= 705
Aisle Carpet	1600 sq. ft. @ .22	= 352
	Total units of absorption	1237

The volume of the auditorium is very nearly 206,000 cu. ft. Then, from the Sabine formula:

$$t = \frac{.05 \times 206{,}000}{1237} = 8.3 \text{ seconds}$$

This is the time reverberation period for the house empty, with no seating. The formula holds for a sound of 512 frequency, or one octave above middle C on the piano, and of standard intensity. In other words,

it would take a sound of 512 frequency and standard uniform intensity 8.3 seconds to become inaudible after the source of sound had ceased. The maximum time allowance for best hearing conditions has been previously termed the optimum or satisfactory reverberation period. The optimum for the present room with 206,000 cu. ft. volume is 1.5 seconds. This value is found in Table II:

Table II

OPTIMUM PERIODS OF REVERBERATION

The following table is prepared from published data compiled by Professor F. R. Watson.

	Seconds		Seconds
Below 7,000 cubic feet	1.0	145,000 to 225,000	1.5
7,000 to 20,000	1.1	225,000 to 330,000	1.6
20,000 to 45,000	1.2	330,000 to 465,000	1.7
45,000 to 85,000	1.3	630,000 to 835,000	1.9
85,000 to 145,000	1.4	835,000 to 1,000,000	2.0

This, compared with 8.3 seconds, as just computed for the room empty and with no seating, indicates that intelligible hearing would be very nearly impossible. The trail of sound following one syllable of speech would not die out until approximately 25 or 30 succeeding syllables had been uttered. There would consequently be such a jumble of sound that an average speaker could not be understood unless within a few feet of the listener.

In order to show the effect of seating upon the acoustical conditions, first consider placing unupholstered plywood chairs in the room similar to that shown in Figure 2.

This chair has a sound absorption value of .24 units each as determined by actual laboratory tests. The following change in the reverberation period would result:

1500 plywood chairs @ .24 per chair = 360 Units of Absorption

Absorption of the room without chairs 1237

Total Units of Absorption .. 1597

$$\text{t for the room with no audience} = \frac{.05 \times 206{,}000}{1597} = 6.5$$

Due to the absorption of the plywood chairs, the period for the room has been reduced from 8.3 to 6.5 seconds but it is still so far in excess of the optimum reverberation period that hearing conditions are greatly impaired. The bad condition is relieved, however, with the admittance of auditors. Due to the loose and porous nature of clothing worn, and to its considerable area, the human being possesses considerable absorption qualities. It has undoubtedly been noticed by the reader how much better hearing conditions are with a maximum audience than when a house is but sparsely filled.

Table I gives the average value of the absorption per auditor seated as 4.7 units. This figure was determined by Sabine and has been generally adopted for acoustical analysis work. In the preceding computations, the plywood chairs were figured as having .24 units of absorption per chair. Since the accepted absorption value of auditors seated is 4.7 each, in figuring the ab-

FIG. 5

sorption added to the room by increasing audience, it is necessary to deduct the absorption already computed for the chairs. Consequently, each auditor would add 4.7 —.24 or 4.46 units by his presence.

It is customary to compute reverberation periods for the house with no audience, ⅓, 2-3 and maximum audience. Correction is usually obtained that will give optimum or satisfactory conditions of reverberation at ⅓. Following are the computed reverberation periods for the auditorium seated with plywood chairs for the various audience sizes:

$$\text{No audience } t = \frac{.05 \times 206{,}000}{1597} = 6.5$$

⅓ Audience (500 @ 4.7—.24 or 4.46 units each)

$$t = \frac{.05 \times 206{,}000}{1597 + 2230} = 2.7$$

2-3 Audience (1000 @ 4.46 units)

$$t = \frac{.05 \times 206{,}000}{1597 + 4460} = 1.7$$

Maximum Audience (1500 @ 4.46 units)

$$t = \frac{.05 \times 206{,}000}{1597 + 6690} = 1.2$$

This clearly shows the effect increasing audience size has in furnishing more absorption in the auditorium with the consequent reduction in reverberation period. The optimum, however, is not reached until the house is well past 2-3 full or at 1200 auditors present.

The wide range in the reverberation period in the above case is shown graphically in Figure 3.

This steep curve is a wide departure from the flat optimum line pictured. The wide range of reverberation for the various audiences produces noticeable change or modulation of the hearing conditions. Since the intensity of the sound reproduced by the "talkie" equipment is diminished in a room with increasing absorption, the equipment must be continually adjusted under such conditions to maintain uniform intensity. The desired effect is a fairly constant reverberation over the various audience ranges, this reverberation being in all cases as near as possible to or below the optimum line. This may best be done by building more absorption into the chairs and placing it in such a manner that it will be cancelled by the audience, the auditors replacing the chairs' absorption with their own, thus maintaining a uniform condition of absorption.

The next computation is made with upholstered chairs which possess an absorption of 1.7 units each as determined in the laboratory. This chair is pictured in Figure 4.

With this chair in the room in place of the plywood, the absorption of the room is increased as follows:

1500 chairs @ 1.7 units each	=2550
Absorption of room without chairs	=1237
Total	3787

In this case, the absorption added by the auditors has been reduced to 3.0 units per auditor (4.7—1.7=3.0). The following reverberation periods would obtain:

$$\text{No audience } t = \frac{.05 \times 206{,}000}{3787} = 2.6 \text{ Sec.}$$

⅓ audience (500 @ 3.0)

$$t = \frac{.05 \times 206{,}000}{3787 + 1500} = 1.9 \text{ "}$$

2-3 audience (1000 @ 3.0)

$$t = \frac{.05 \times 206{,}000}{3787 + 3000} = 1.5 \text{ "}$$

Maximum audience (1500 @ 3.0)

$$t = \frac{.05 \times 206{,}000}{3787 + 4500} = 1.2 \text{ "}$$

Here it is seen that the optimum has been obtained at 2-3 audience or 1000 instead of at about 1200 as in the case of plywood chairs. There is less variation in the reverberation periods and the reverberation curve is much flatter than that produced with plywood chairs, the curve more nearly resembling the flat optimum line (Figure 3). The curve crosses the ⅓ audience line

at about a half a second above the optimum which shows a decided improvement over the plywood curve, which crosses at about 1.2 seconds above.

If it were necessary to have optimum conditions at ⅓ audience, where it is usually desired, and still use either plywood chairs or those with inserted panel backs, a certain amount of wall treatment would be necessary in addition. Treatment applied to the walls or anywhere in the house except in the chairs would not be cancelled by the auditors and would, therefore, give wider variations in reverberation periods with varying size of audience than if the absorption were properly built into the chairs. If, however, it were decided to install wall treatment, it would first be necessary to determine the amount of absorption required in the room to give optimum reverberation. This is found by substituting the optimum reverberation time 1.5 in the Sabine equation and solving for the absorption, as follows:

$$1.5 = \frac{.05 \times 206{,}000}{a}$$

$$a = 6860 \text{ Units}$$

In the case of the plywood chairs, the amount of absorption already in the room at ⅓ audience is 3827. The additional amount necessary to give optimum conditions would be 6860—3827 or approximately 3030 units. In the case of the inserted panel back chair, the addition required would be 6860—5287 or approximately 1570. This additional absorption could be obtained through the use of any of the recognized wall treatments now on the market. Some treatments give as much as 70% absorption. In computing the sq. ft. of wall treatment, it should be remembered that the treatment covers up hard plaster, the absorption of which has already been figured at 3%. Thus, if a wall treatment were being considered, the absorption of which is .50 per sq. ft., the additional absorption added by the treatment would be .50—.03 or .47 units per sq. ft.

Acoustical conditions can be made more uniform by installing a chair with still better absorption properties than the two already mentioned. Such a chair is pictured in Figure 5, its absorption being 3.0 units each. The computations using this chair follow:

1500 chairs @ 3.0 units each $= 4500$
Absorption of room without chairs $= 1237$
5737

$$\text{No audience } t = \frac{.05 \times 206{,}000}{5737} = 1.8 \text{ Sec.}$$

⅓ audience (500 @ 4.7—3.0 or 1.7) $=$

$$\frac{.05 \times 206{,}000}{6587} = 1.55 \text{ Sec.}$$

2-3 audience (1000 @ 1.7) $=$

$$\frac{.05 \times 206{,}000}{7437} = 1.4 \text{ Sec.}$$

Maximum audience (1530 @ 1.7) $=$

$$\frac{.05 \times 206{,}000}{8287} = 1.2 \text{ Sec.}$$

Here the range of reverberation time is limited to from 1.2 to 1.8 seconds. The acoustical conditions are so uniform from no audience to maximum audience conditions that during rehearsals when the operator makes out his log sheets, there should be no change necessary in fader settings to compensate for fluctuations in intensity due to wide changes in absorption. The curve (Figure 3) shows that optimum conditions are obtained at a little below 750 auditors. For ⅓ audience, the reverberation time is .1 seconds over the optimum, a difference which it is impossible to detect.

Thus it is seen that the seating in a theater has a vital bearing upon the acoustical properties of the room. What is desired is uniform reverberation at the optimum or satisfactory reverberation period. A balancing factor is necessary to maintain this uniform condition by keeping absorption conditions from changing through too wide a range with changing size of audience. This balancing factor is found in scientifically designed upholstered seating embodying the proper construction and distribution of absorption materials.

WALNUT DOOR TO CABINET FOR S. ROLANDI, SAN FRANCISCO

HAND CARVED BY RUDOLPH T. SCHWARTZ

ARCHITECTURAL CONTROL

THE following article by Andreas Liber, municipal Councillor at Budapest, will be read with interest by Americans who are in sympathy with Architectural control in community development:

We deal with this subject in the sense that not only building regulations, but all regulations that protect the beauty and the amenities of our town encourage good development.

The building ordinance for the metropolitan area issued by the Metropolitan Building Board in 1926 and brought up to date from time to time, is extremely important. It deals with the stipulations regarding building land, conditions for granting building permits, and the arrangement of pipes and cables for water, gas and electricity. It determines building zones, of which there are eight at present. These zones determine the size of building plots, the building types (whether they are to be "closed" or "open"; with front gardens or centre courts, etc.), the height of buildings and number of stories, the size of courts, space about buildings, etc. The paragraphs that contain these regulations are of the greatest importance for ensuring good development in the different zones and for protecting the beauty of the town picture in areas of special interest, e.g. the banks of the Danube, the Royal Quarters, etc. Other paragraphs relate to the alignment of projecting parts of buildings, to the buildings, to the building of factories, boundary walls, etc., to facades, height, gables, masking of exterior walls, exterior decorations, friezes, ornamentations, etc. All the regulations on these points provide for an agreeable town picture. Facades of glaring colours are forbidden. Public property in the streets or on buildings, monuments, road surfaces, streams, trees and shrubs, lamps, street signs, house number-plates, public services, etc., are protected from damage or uglification due to building operations being in process.

Permits are necessary for all new buildings, additions, alterations and increases in number of stories. They are also required for installing motors, boilers, power transmitters, noisy machines, lifts, porches on business premises, display cases, exterior advertising contrivances and for the demolition of old buildings.

The authorities in Budapest are the Magistrat (Central Executive) of the City Council and the district offices, the Metropolitan Building Board, and the Ministry of the Interior.

The Magistrat makes decisions on proposals submitted to it by the Building Committee and the Department for Town Planning and Control of Private Building. The Building Committee is presided over by a vice-burgomaster; it consists of forty town councillors chosen by the general assembly, with the chief medical officer and the chief legal officer. Proposals on town planning are dealt with in full session; a sub-committee grants for private building schemes. The district offices (ten at present) make decisions on smaller building matters connected with carrying out the building work. They grant permits for occupying new buildings after ascertaining that they are in conformity with the approved plans; are responsible for housing police, supervision of existing dwellings, and grant permits for the demolition of buildings.

The Metropolitan Building Board was created in accordance with the 1870 Act. It is presided over by a representative of the government and consists of eighteen members, nine of whom are elected by the general assembly of the City Council and

nine appointed by the Ministry. In addition there are the following advisory members: two technical members of the Magistrat, four representatives from the Building Committee, and co-opted experts. The Board is re-elected every three years. Originally the main duty of this Board was the planning and carrying out of large scale operations (Danube embankments, ring roads, the Andrassy radial road, etc.). It is now entrusted also with preparing any extension schemes that affect the whole of the capital or the whole of any quarter; co-operating in carrying out such schemes; determining the route, building alignment and level of streets and places; making building ordinances; dealing with private enterprise building matters where permits are connected with town planning matters and adjudicating on appeals concerning private enterprise building.

Application for building permits must be submitted to the Magistrat with an extract from the land register, a site plan to scale 1:720, in outer area 1:1440 floor plan, plan of elevation to scale 1:100; and a builder's plan giving figures on a scale that permits judgment. As everybody must conform to the lines laid down in the official plan the plans submitted are first examined from this point of view and to ascertain whether the area will be affected by an approved or proposed planning scheme.

If a scheme has already been determined an agreement must be made by which the builder gives up to the local authority the land required for public purposes (roads, open space, etc.), while the local authority hands over to the builder land taken from public purposes to be added to the building plots. If the area will be so much affected by the replanning or replotting as to be unsuitable for building it is expropriated in accordance with the 1881 Act.

If a scheme has not been definitely determined for an area the Building Board may postpone granting building permits for at most one year, or they may grant a permit on condition that the owner makes a statement, duly recorded in the land register, by which he agrees to fulfill all obligations and charges that may be imposed on him by the authorities when the scheme is determined upon.

The 1881 Act provides for the protection of buildings, streets and places (squares) of artistic or historical value and a National Commission for the Protection of Historic Buildings has been formed. In Budapest the work of inspection and repair is constantly carried on. For this purpose there is the competent municipal department, also a special committee and a group of experts. In addition to this when an ancient building in private ownership has to be demolished an endeavor is made to preserve some part or some record that would be valuable for a museum. This is done by acquiring special parts that are interesting because of their style or the part they have played in the history of the town, or by perpetuating interest by means of photographs, pictures or models.

The display of signs, advertisements, etc., is regulated by the building ordinance and partly by the metropolitan ordinances dealing specially with the question. As the display of posters and advertisements is carried on as a municipal undertaking the responsible persons can devote themselves constantly to public interests as regards aesthetics and public safety.

In accordance with Par. 14 of Act XXXI of 1888, the Minister of Commerce grants permits for high tension transmission cables on public land. But by a regulation issued by the Minister in 1904, the Magistrat of Budapest is empowered to grant provisional permits when not more than 300 metres of cable is necessary.

Permits for installing wires for electric tramways (at present about 400 kilometres of line is fitted with overhead wires) are included in the general permit for the whole undertaking of constructing the tramway, the conditions of which are set forth in the deeds. As owner of the public land within the town area, the municipality grants permission for using the land for tramway purposes and includes in the contract provisions that will safeguard good town development. (At present the electric

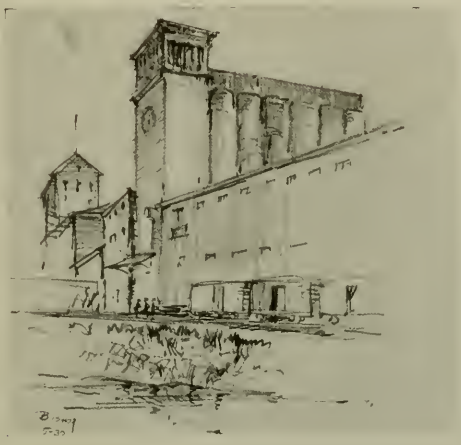
tramways service within the metropolitan area is operated by a company controlled by the municipality). The contract must be approved by the Minister of Commerce. The deeds are prepared by a joint committee (consisting of representatives of the municipality, the Building Board, and the central government) after examining the plans on the spot and passed by the Minister of Commerce, who also grants permission for the new tramways to be used (on the recommendation of the joint committee after police and technical examination). Overhead wiring for telephones, radio, etc., comes under the control of the Post and Telegraph Department of the Ministry of Commerce.

The Building Ordinance stipulates that every property owner is obliged to permit to be fixed to his premises lamps for public lighting purposes, pipes, wires and poles for water, gas and electricity, also fire alarms, drain ventilators and other public utility fittings. Further, he must permit the erection of cables for electric tramways and sign-posts indicating halting places or warning the public of danger. These regulations protect the town picture and ensure public safety.

The encroachment of business (from cafes, inns, tobacco shops, etc.) on open spaces, places (squares), and pavements is subject to a permit granted by the Magistrat. Statute No. 1332 of the year 1901 fixes the maximum amount of space that may be taken up, determines the amount of payment and safeguards public traffic.

Control of street trade is provided for in Statute 1100 of the year 1922. The Budapest City Council, through the Magistrat, District Offices and Market Board, is responsible for determining, controlling, and supervising open market places in addition to the Central and District Market Halls. The open markets may be converted as required into roofed-over or closed halls.

The disposal of refuse, abatement of the dust and smoke nuisance and other drawbacks, consequent upon rapid and extensive development of large towns, are under discussion.



PENCIL SKETCH BY RALPH J. BISHOP

ENGINEERING *and* CONSTRUCTION

THE SAN GABRIEL DAM

by Alan S. Hart, C. E.

Here is an account of the investigation of what was to have been the world's highest dam—It tells why the application for permission to build the structure was unconditionally denied:

ON December 7, 1928, the Los Angeles County Flood Control District awarded a contract for the construction of the San Gabriel Dam. This dam was to have been one of the curved gravity concrete type and would have been the world's highest and most massive structure. As proposed, it would have been nearly 500 feet above bedrock and 2300 feet long on the crest, with a thickness at base of 400 feet. The contract called for the excavation of about 1,250,000 cubic yards of earth material and the placing of 4,000,000 cubic yards of concrete. This dam would have provided a huge reservoir in the San Gabriel Valley, capable of storing 240,000 acre-feet of water. The site of the dam is 10 miles from the town of Azusa, which in turn is 35 miles from the city of Los Angeles, at a point known as "The Forks." This is just below the juncture of the east and west forks of the San Gabriel River.

On August 15, 1929, the new law went into effect, requiring the plans for all dams municipally or privately constructed to be approved by the State Engineer. The purpose of this regulation is to protect the citizens of California against another catastrophe similar in nature to that of the failure of the St. Francis Dam in 1928. Meanwhile, work had progressed rapidly on the earth excavation during the spring and summer months of 1929. The immediate result of this law was to close down operation on the San Gabriel Dam project until the plans were approved by the State Engineer, Edward Hyatt.

For the purpose of investigating conditions at the damsite as to safety of constructing the dam, the State Engineer immediately appointed a commission of six prominent geologists and engineers, none of whom had ever been connected with any of the work of the Los Angeles County Flood Control District. The members of this commission were:

Charles P. Berkey, consulting geologist; professor of geology, Columbia University, New York.

G. A. Elliott, chief engineer and general manager, Spring Valley Water Company, San Francisco, California.

M. C. Hinderlider, state engineer of Colorado, Denver, Colorado.

George Louderback, consulting geologist and professor of geology, University of California, Berkeley, California.

J. L. Savage, chief designing engineer, United States Bureau of Reclamation.

Ira A. Williams, consulting geologist, Portland, Oregon.

On November 21, 1929, this commission made its joint report to the State Engineer. It contained the unanimous conclusion that the proposed San Gabriel Dam could not be built at the location selected without serious risk to the life and property of the residents in the lower San Gabriel Valley.

The natural conditions in the San Gabriel mountains are much more complex than is usually appreciated. The

rocks underlying the damsite are ancient crystalline types, including granitic and dioritic gneiss and occasional achists, all cut by a variety of igneous intrusions, including granite, aplite, diorite, diabase, basalt and prophyrites. This has resulted in a crystalline complex which would ordinarily be satisfactory for any engineering structure if it were not for the decay and deformation which the rocks had undergone.

The rock complex is cut through in every direction by faults and slips and crush zones that have separated the mass into blocks of various sizes and shapes. Not any particular part of the damsite is free from this condition. Also these blocks, broken by faults and slips, are injured internally so that the material tends to break up easily and to fall apart. Thus there exists no extensive portions of solid rock.

The original rock was not of itself weak, but merely was unevenly resistant, and the forces producing movement have been powerful enough to overcome the resistance of the entire mass of material.

In addition to the faulted and crushed condition of the rock, a great deal of it is extensively decayed and disintegrated. The pulverized rock along the fault lines is often turned into a clay gouge, some of which is so soft that when moist it can be handled like putty.

Even the floor of the canyon is not free from this broken up condition. A badly broken zone lies beneath the east third of the canyon bottom, where the bedrock channel is the deepest.

Landslides are common on the slopes of the canyon. These are probably due to the slumping of individual blocks, or groups of blocks, separated from each other by slip planes, when they are weakened by progressive undercutting of a stream. Relatively recent landslides have happened at the damsite and at several places in the immediate vicinity.

The proposed dam was to be built with a slight curvature, but arch action had not been used in the design for sustaining of the water load. It was designed purely as a gravity section with proper allowances for the curvature in the plan. The calculated stresses were based on the assumption that the resistance of the foundation is uniform throughout the base of the dam.

The fundamental requirement for a high concrete gravity dam of this type is that it shall be built on sound, firm rock of a uniform compressibility. According to the findings of the investigating commission, this condition does not exist at the San Gabriel damsite.

The Los Angeles County Flood Control District made application to the State Engineer for authority to construct the San Gabriel Dam on October 26, 1929.

Acting upon the report of the commission, the State Engineer disapproved the application for the construction of the proposed dam on November 26, 1929.

At the close of the report it was stated that it was believed possible to erect a dam of the flexible type, such as one of an earth and rock fill with a concrete core, of conservative proportions, on the existing foundation site without risk of failure to the structure. Material already excavated could be used in construction of this new type of dam.

Since this report covered only the San Gabriel Dam as proposed, it is easily conceivable that new plans may yet see the completion of a smaller dam on the San Gabriel River at "The Forks," which will not endanger the lives or property of the residents of the lower San Gabriel Valley.

STEEL BEAMS STRONGER WHEN ENCASED IN CONCRETE

THE special committee appointed by the Western Society of Engineers to conduct a series of load tests on concrete- encased steel beams and girders at the plant of the American Bridge Company in Gary, Indiana, during the latter half of 1929, has completed its report.

The report is entitled "Test of Steel Floor Framing Encased in Concrete," and is in three parts. The first part, by Sidney G. Martin, contains a brief review of various published reports of tests or investigations of the composite action between structural steel beams and the concrete in which they were encased. Part II, by Charles C. Whittier, covers the method of construction, the quality of materials, the conduct of the tests and the method of recording the test results. Part III, by Frank A. Randall, contains the analysis of the test data and the recommendations of the committee.

The floor construction was not tested to destruction. In fact, the load tests were not continued far enough to stress the steel to its elastic limit. The committee members feel, however, that the work was continued far enough to obtain the design data desired. The structure has been demolished since the conclusion of the tests.

The structural steel members were subjected to load tests and deflection measurements before the panels were concreted, and the same members were again measured for deflection after the concrete had hardened for 28 days and the test loads were imposed.

Deflection measurements and gauge line readings were taken at several stages. The first measurement tabulated for any particular beam or girder was for the dead load. The second test readings were taken when the imposed test load was approximately equal to the design load of 100 lbs. per sq. ft. Two additional readings were taken under greater loads, the final deflection measurements and gauge line readings having been taken when the test load was about twice the sum of the dead load and the design load.

With the tests tabulated the committee compared the actual stresses in the structural steel members, as determined from the deflectometers and strain gauges, with the computed stresses as determined by ordinary design practice. As might be expected, the indicated tensile stress in the bottom of the flange of the steel members was much greater than the compressive stress in the upper flange of the same members. The difference is due primarily to the fact that the concrete in the upper part of the composite beams and girders took a considerable share of the compressive strength, whereas the concrete around the lower flange of the steel members probably did not assist in taking tensile stress. This had the practical effect of raising the neutral axis of the members, considered as composite beams, so that the tensile strength in the lower flange was reduced considerably below what it would have been if unencased.

Without going into minute detail it will be sufficient to say that the measured stresses in the tension flanges of fully loaded beams averaged 56 per cent of the so-called computed stresses in the cinder concrete panels and 57 per cent in the gravel concrete panels. The corresponding percentages in the compression flanges were 34 and 45 per cent, respectively. The term "computed stress"

denotes the theoretical stress obtained by usual design methods when the steel section is regarded as carrying the entire load.

In view of these facts the committee recommended unanimously that with materials of the quality used in this test, concrete-encased steel beams and girders in the form of structural steel I-beams up to 24 in. in depth when wrapped in steel wire fabric or mesh and encased in a rectangle of concrete with a minimum covering of 2 in. on the flanges of the I-beams, and when used in connection with concrete floor slabs not less than 2½ in. above the top flanges of the I-beams, may be designed by considering the structural steel section alone but placing the allowable unit working stress at 24,000 lbs. per sq. in.

It is the intention of the committee, with the support of the Western Society of Engineers, to recommend the adoption of an amendment to the Chicago city building regulations permitting concrete-encased steel beams and girders to be designed in accordance with the foregoing recommendation.

The committee consisted of Frank A. Randall, consulting engineer, Chicago, chairman; Homer G. Farmer, of the Universal Atlas Cement Company; John Brunner, of the Illinois Steel Company; Charles C. Whittier, of the Robert W. Hunt Company; and Albert Reichmann, of the American Bridge Company. Copies of the full report of the committee may be obtained from the Western Society of Engineers.

Courtesy Gladding, McBean & Co.

ALEXANDER & BALDWIN BUILDING, HONOLULU
Dickey & Wood and C. W. Dickey, Architects

The ARCHITECT'S VIEWPOINT

¶ *Convention Echoes*

¶ *Modernism Again Under Fire*

¶ *Anent the Chrysler Building*

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THESE belated notes are in the nature of a convention letter and, in particular, of the Convention of the American Institute of Architects. In reality the Institute is a center toward which, annually, several allied gatherings focus. To illustrate how varied are the aspects of our profession, meeting almost simultaneously and in Washington have been the Collegiate Schools of Architecture, the Fine Arts Commission, the National Council of Registration Boards and the Producers' Council. As always, some of the architectural publishers and editors are here and many of the writers—Kenneth Murchison, C. Howard Walker and Hubert Ripley, among the better known.

One major topic of the Convention discussions has been "Modern" or "Contempoary" (take your choice) Architecture, to which two regular sessions were profitably devoted. George Howe, of Philadelphia, sometimes let his delivery get in his own way when he presented a brilliant paper which will be worth reading when it is printed in the Convention Proceedings. One of his really constructive comments was upon a basically foolish wastefulness we take for granted and condone; viz, heavy floor and wall constructions hoisted to the top of tall skeleton buildings, the weight of such floors themselves being commonly much greater than the loads they carry; the wall masonry being an always present threat to passers-by in the streets below. His alternative of "a gossamer veil of glass and light metal" suggested interesting possibilities although, where sheet metal has thus been employed before, it has not fully carried conviction. However, this thesis, abstractly, is certainly sound, so let us hope to see it tried out more frequently, until some master does the real thing!

C. Howard Walker—growing venerable now—and gently, reasonably, dignifiedly persuasive as always, following Mr. Howe, wonders what all the commotion is about, quoting Emerson:—"Why so hot, little man—why so hot?" Mr. Walker had a few notes by way of a "prepared paper" which he supplemented by his self-termed "embroidery". The former were terse, the latter sparkling with wit and inspiring in their wisdom. His vivid description of a man he once saw symbolizing "structuralism" by appearing in the nude, with a skeleton painted on him . . . and his quietly, slow-spoken comment: "He was a sight!" certainly were complete rebuttal of the creed "truth at any cost."

Louis Le Baume, presiding, was at his best, and John Galen Howard, called on by the chair to say a word for stand-patting—reminded his old friends that he has and had always been a modernist . . . as we who are his present associates know.

The afternoon session brought out other contributions to the discussion. Earl Reed showed by lantern slides and his enlightening comment on them the successive transitions, from the first true steel frame in Chicago, through the Louis Sullivan "idea", the Frank Lloyd Wright "carrying on"—with and after Sullivan, and the latest flowering of Chicago "Modernism" in some recent things, particularly by the younger Holabird and Root, the pictures culminating in a night-light study of the very modern Transportation Building now under construction for the Chicago Exposition of 1932.

R. T. Walker (I should guess related to C. H. W. by neither blood nor creed) summed up in words his sound theory that culture marches on side by side with civilizations—with the implications that civilizations is a "plural"—not a "singular"—noun and that there is no indication that any past civilization has had a sacred finality.

In concluding the "Contemporary" sessions, Everett Meeks, Dean of the School of Fine Arts of Yale, presented the picture of a newly young world—in which some extremes and excesses are to be looked for: from which the emergence of great things is already beginning to show.

So we may conclude that "Ye must be born again", spoken significantly nearly two thousand years ago, still has a meaning. Indeed, Andrew Mellon, on his seventy-fourth birthday, implied some such a belief. And did not Nicholas Murray Butler, returned recently from abroad and interviewed, speak of Youth in Europe—the Fascisti and the Soviet, both staked upon youth? With us, does not the very air belong to Youth? Theirs are flight, and radio. Theirs the screen . . . and even that new stage which—so predicts Walter Pritchett Eaton — is coming from youthful groups centered in and recruited from high schools and colleges. It behooves those who undertake to "teach" Architecture to recognize that, as always, Youth has a just right to question Age.

Apropos of teaching Architecture—every pedagogue should have heard (those who did not *must* read it) Leicester B. Holland's paper read at the A. I. A. session devoted to Education. The voice of the scholar who, knowing the real world as it *is,* has ideas as to preparation for Architecture as it *is going to be* in the coming years! So you should get hold of Dr. Holland's paper, and it will have a message for you—whether you "teach" or not. And, en passant, certain thoughts may be ventured: that not all in college staffs are teachers, nor are all the good teachers on college staffs . . . nor, in the last analysis, is Architecture really teachable!

* * *

FRESH from the Convention discussion of "Modern" architecture, this writer, visiting New York, sought out the Chrysler Building and successfully wheedled his way to the 60 something-th floor, and "got a thrill" from the almost miracle of the sheer height above the nearby pinnacles.

Of course, the Chrysler design comes in for endless—and futile—criticism as well as for un-evaluating praise. In photographs it looks its worst, so let us not condemn that building too severely. Let us admit;—that its design is incoherent, carrying no conviction other than that resulting from sheer size and height; that the outline of the main entrance doorway suggests the wilful non-conformity of a "Modern"-inclined sophomore; that the successive sunbursts, in stainless steel, that form its crowning element seem to say that more money, and more, became available to go higher and higher. These criticisms are all heard, and none of them are without some justification.

As to the main entrance, I, for one, am reconciled. That which seems commonplace, in the photographs, seems inspired in the reality: for polished black granite and black marble shallowly moulded, set in and trimmed with satin-surfaced stainless steel framings, the whole built at such noble scale, make one gasp.

Once one enters, he finds a new thrill in the lobby—triangular in plan—its wall veneer of red marbles frankly announced—its "Modern" ceiling decoration, having a perspective of the building as its dominant motif . . . its cleverly planned elevator lobbies in alcoves. Then, a new and worth while idea, the elevator cars,—two dozen of them or more,—all different, all refreshingly modern in spirit and material, each treated as an individual room.

From near the top of the Chrysler Building down by an elevator making no stop below the 40th floor—to the street level: thence across the street into the Chanin Building and down again, this time into the subway! Out into daylight again at Wall Street, and to the new Bank of Manhattan Building designed by Craig Severance and our own

former student at California—Yasuo Matsui. It is a great piece of work! After a short visit with an old friend in his office there, we went, without going out of doors, up into the Rookery—a marvelously located club looking out on all four sides from the 58th floor. One seems almost to float in air. Yes! They do it that way, when they have "arrived" in New York. From the Rookery they look down, at a surprising angle, to Bedloe's Island and the "Liberty" whose back is appropriately turned toward the Battery!

On no less authority than the *New York Times* news columns, it may be said that Ex-Governor Al Smith, too, seemed to be spending that same day "contacting" (is that the proper term?) Architecture. He took part in and made a speech at the formal "opening" of the Chrysler Building and, later in the day, after a meeting of the Empire State Building Board, as president of the Board, issued an order to the architects that they should design and have executed a suitable tablet, setting forth the too seldom proclaimed fact that the building had had benefit of architects. Presumably the world would already have been told of promoters, owners, engineers, and plumbers! *They* all "advertise." From the article appearing in the *Times*, it may be inferred that the owners regard the expense—of both wall space and tablet—as an item properly charged against construction costs.

WM. C. HAYS, F. A. I. A.

EDITORIAL CHAT

CAUGHT in bold relief by the clear light of dawn, glowing in rose and gold in the rays of the setting sun, the Shell Oil Building, latest arrival in San Francisco's growing group of tall buildings, stands nobly and majestically among its contemporaries.

In its long lines enhanced by black spandrells, is felt a touch of the moderne, perhaps wiser to say, is sensed a touch of the moderne, for this newest office building mildly gives that impression.

The position occupied by the new Shell Building is a commanding and imposing one. Situated at the foot of Bush Street, at the gore of Battery and Market, it has a clean, wide sweep, allowing a perfect view of the facade and details in perspective and presents a striking picture in vertical lines. This situation is one of more than ordinary interest for the old bay shore of early San Francisco stretched along what is now Battery Street and mud flats and little waterfront shanties were once, where thousands pass daily now, nor pause to recall that our fathers have built us a city from such unpretentious beginnings.

Within the building the same perfection of detail has been expressed, with the comfort of those who must work there as an aim. A ramp garage with space for cars of the company and staff, separate from that in general use among tenants and as public space; batteries of high speed, self-leveling elevators climb the twenty-eight floors in record time. Practically every detail of mechanical equipment, which is used to insure daily business life in safety, comfort and agreeableness, has been installed.

The architect, the Shell Oil Company and the contractor are to be congratulated and commended, that between them they have raised a monument to commerce and industry worthy of its place in San Francisco.—E.N.K.

* * * *

IT is rather gratifying to receive a commendatory letter like the following which is in reference to our Frontispiece in the June number: "I want especially to congratulate you on the beautiful reproduction of the Kirk Johnson residence in the June issue. I am so glad it was used. Mrs. Smith was very much pleased." The writer was Luther Maria Riggs, architect, who, with William Allen Horning, associate, is carrying on the work of the late George Washington Smith, of Santa Barbara, and architect of the Kirk Johnson house.

WITH *the* ARCHITECTS

CLUB AND LIBRARY BUILDING

Plans are being prepared by Charles W. McCall of Oakland, for a reinforced concrete club building and library to be erected on The Embarcadero, San Francisco, for the Robert Dollar Company. The building is to be for the benefit of maritime workers. It is planned to start construction this summer. Mr. McCall is also preparing plans for a $30,000 brick veneer church at 33rd Street and San Pablo Avenue, Oakland, for the North Oakland Baptist Society.

WILLIAM W. WURSTER BUSY

New work in the office of William W. Wurster, architect, 260 California Street, San Francisco, includes a large country home for Miss Marian Hollins at Pasatiempo Estates, Santa Cruz, in addition to racing stables for polo ponies for the same owner and two country houses, one at Big Creek, near the Sur, and the other at Lucia, near the Monterey-San Luis Obispo line.

TO SHOW COMPETITION PLANS

Plans which were submitted in a recent competition for a new home for the Salem Lutheran Home Association of Oakland, will be shown in THE ARCHITECT AND ENGINEER for August. Henry H. Gutterson, was given the award and he has been authorized by the Trustees of the Association to proceed with working drawings for the first unit, estimated to cost $75,000.

TWO RESIDENCE CONTRACTS

Two contracts have recently been awarded by Albert Farr & Francis J. Ward, associated, of San Francisco; one a two-story brick veneer house at Hillsborough to the George W. Williams Company for John D. Bromfield and the other to James L. McLaughlin Company for a brick veneer house at Woodside for Walter E. Buck.

20 STORY PORTLAND BUILDING

Morgan, Walls & Clements, Van Nuys Building, Los Angeles, have been commisioned to prepare plans for a twenty-story Class A hotel building to occupy an entire block bounded by Holladay, Multnomah, 13th and 14th Streets, Portland, Oregon. The Lloyd Corporation are the owners of this $2,500,000 four-hundred room hostelry.

SAN JOSE DEPARTMENT STORE

A contract for the construction of a new department store building in San Jose for Hale Bros., Inc., was awarded recently to the Dinwiddie Construction Company of San Francisco for approximately $400,000. The plans were prepared by Messrs. Swanson & Lane of Chicago and Binder & Curtiss of San Jose, associated. The latter firm will have entire supervision of the construction work.

SAN FRANCISCO HEALTH CENTER

Preliminary plans by S. Heiman, architect of San Francisco, have been approved for a four-story Class A health center for the City and County of San Francisco. The location is Grove and Polk Streets. Features of the $800,000 building will be an auditorium for lectures, several laboratories, nine clinics and an emergency hospital.

BERKELEY APARTMENTS

Plans have been completed by Davis-Pearce Company of Stockton for a $200,000 store and apartment building to be erected on University Avenue and Sacramento Street, Berkeley. The structure will be three stories and basement, steel frame and brick walls and will contain six stores and 38 apartments.

GARAGE AND SALES BUILDING

Messrs. Reed & Corlett, of Oakland, have completed plans for a two-story reinforced concrete automobile sales room and garage at Twenty-Sixth and Webster Streets, Oakland, for Fred E. Reed Company, Inc. The design is Spanish.

OFFICE BUILDING ADDITION

August Nordin, Mills Building, San Francisco, has completed plans for a two-story and basement reinforced concrete office building addition to the Stauffer Chemical Company's plant at 640 California Street, San Francisco. G. P. W. Jensen has the contract.

LOS ANGELES COLLEGE

J. P. Brennan, 2820 Regent Street, Berkeley, has been awarded a contract to build a three-story Class B dormitory and classroom building in Los Angeles for the Mount Saint Mary's College. The contract price is $230,000.

ARCHITECT HAS NEW STUDIO

Joseph Halstead Roberts, architect, has completed the erection of an Elizabethan office and studio building for his own occupancy, at 501 Termino Avenue, Long Beach, California, and is now occupying the new building. Mr. Roberts was formerly located at 312 Marine Bank Building for a period of over eleven years. Upon the demolition of the Marine Bank Building his offices were removed to temporary quarters at 616 Pacific Southwest Building, Long Beach, until his studio was ready for occupancy. As secretary of the Architectural Club of Long Beach, Mr. Roberts asks that all communications to the club be directed to the new address.

"ARCHITECTURAL MASTERPIECES"

Jamieson Parker of Portland is chairman of a committee of Portland architects named to determine, at the request of *The Oregonian,* the outstanding example of Oregon architecture. Serving with him is Ellis F. Lawrence of Lawrence, Holford, Allyn & Bean, and Walter E. Church of Morris H. Whitehouse & Associates.

This committee will welcome suggestions that will help them determine the structure which will best represent Oregon in a symposium of architectural masterpieces to be published by the *Chicago Tribune,* taking in every state in the union.

APOLOGIES TO C. F. MASTEN

The California State Board of Architecture recently issued an architect's certificate to J. Kendall Masten of 3954 Washington Street, San Francisco.

In announcing the granting of the license in THE ARCHITECT AND ENGINEER for June, the name of Charles F. Masten was confused with that of J. Kendall Masten. Charles F. Masten has been a licensed architect for a number of years and at present is the senior member of the well known firm of Masten and Hurd, Shreve Building, San Francisco.

J. Kendall Masten, to whom the certificate was issued, is now in San Diego.

REOPENS OFFICE

Charles E. Perry, architect, has reopened his office for the practice of architecture at 427 Sacramento Street, Vallejo, and 519 California Street, San Francisco. Mr. Perry is at work on plans for a six-story reinforced concrete printing plant to be built in San Francisco for the Edward Barry Company.

PERSONALS

ARNOLD CONSTABLE, of San Francisco, architect chosen to design the altar in the Blessed Sacrament Church, Hollywood, is in the East to inspect the models of the altar which are being made at Chicago. Later the models will be sent to Italy for execution in Italian marble.

EMERSON KNIGHT, landscape architect of San Francisco, has prepared specifications for beautifying the grounds around the new postoffice building at Kentfield, Marin County.

ARTHUR O. JOHNSON, formerly of Fresno, is now associated with Woodrow Wethered in the design of schools and banks. His office is at 18 Turk Street, San Francisco.

W. W. HASTINGS, architect, formerly located on Tyler Street and Del Monte Avenue, Monterey, has opened new offices in the Pryor Building, 282 Elvorado Street, Monterey.

GARRETT VAN PELT, JR., of Pasadena is enjoying a two months' tour of Southern and Western Europe. He is accompanied by ROBERT ALEXANDER of New York. They will travel over Europe in an automobile.

RICHARD J. NEUTRA of Los Angeles has sailed on a trip around the world, which will bring him back to California in the fall. While in Japan he will address Japanese architectural associations at Tokio, Kyoto and Osaka. He has speaking engagements in Europe at Frankfort, Berlin, Zurich and other cities. Mr. Neutra studied architecture in Munich and Vienna.

M. L. BARKER has moved from 1154 N. Western Avenue to 346½ S. La Brea Avenue, Los Angeles.

CASEBOLT DAKIN, architect, has moved to 2917 Benvenue Avenue, Berkeley.

PAUL V. TUTTLE, architect, announces the removal of his offices from 337 Twelfth Street, Oakland, to 1117 Pearl Street, Alameda.

Miss Gwendolyn Austin, daughter of JOHN C. AUSTIN, architect of Los Angeles, was married June 15 to U. FLOYD RIBLE, whose recent work in the architectural field has created much favorable comment.

MILTON M. FRIEDMAN, architect, announces the removal of his offices to Suite 635, Rives-Strong Building, 112 West Ninth Street, Los Angeles.

PRAISES PASADENA ARCHITECTURE

J. Monroe Hewlett, vice-president of the American Institute of Architects, says that Pasadena and Philadelphia are the two American cities with a prevailing type of residential architecture.—The Lintel.

SKETCHES BY RALPH J. BISHOP

Four hundred sketches comprised a one-man exhibition of Ralph J. Bishop, draftsman for Sutton, Whitney and Dugan, architects of Tacoma, Washington, which recently went the rounds of the draftsmen's clubs in Spokane, Pullman, Moscow, Seattle and other Northern cities. The first showing was made the week beginning May 19 in Tacoma.

The exhibit includes examples of landscapes and architectural portraits in all mediums, including water colors, pencils, lithography, pastel, pen and ink, crayon, charcoal and chalk. Some of Mr. Bishop's sketches will be published in The Architect and Engineer in August.

AARON H. GOULD, ARCHITECT

Aaron H. Gould, who practiced architecture in Portland, Oregon, from 1910 to 1916, died recently in Detroit, his home since leaving the Oregon city. Mr. Gould was born in Amherst, Nova Scotia, in 1864. He began his career in Boston. Among the major commissions awarded Mr. Gould in Detroit was the $4,000,000 Wayne County women's prison.

VIEWING THE HIGH ONES

P. Beluschi of the architectural firm of A. E. Doyle & Associates is on a tour of the larger cities of the country to study design, construction and operation phases of large structures. The firm will design Portland's 27-story Service Building. It is thought construction will begin about August 1.

RETURNS TO PACIFIC COAST

Frank Brown, former draftsman with Roland E. Borhek, architect of Tacoma, recently returned to the Pacific Coast after graduating from the architectural course at the University of Pennsylvania, and working for some months in the office of Ralph H. Banker, noted architect of Philadelphia.

LOS ANGELES CHURCH

Plans have been completed by Allison & Allison of Los Angeles, for a group of religious buildings for the First Congregational Church of Los Angeles. There will be a chapel, auditorium and educational building.

WOODSIDE RESIDENCE

Reginald D. Johnson, Los Angeles, has completed plans for a $200,000 country house to be built at Woodside, San Mateo County, for Randolph Schilling, capitalist.

HOWARD AND WILLCOX TO LECTURE

Greater public knowledge of the fine arts through the development of Carnegie summer art centers in the universities, traveling lectureships, the dissemination of literature, and adult training is the aim of an expanded program for 1930-31 announced in the annual report of the Committee on Education of the American Institute of Architects.

Financed by a grant of $10,000 from the Carnegie Corporation, representatives of twenty colleges will pursue courses in the Harvard Summer School from July 7 to August 16, the courses to cover the principles in drawing and painting and theory of design, the history of ancient art, the history of Renaissance and modern art, and principles of design in the decorative arts.

The Carnegie Corporation has also provided $5000 to initiate a similar undertaking at the University of Oregon, where Ellis F. Lawrence of Portland, chairman of the Executive Council of the Institute Committee on Education, has assembled a faculty to direct the studies of representatives from twenty colleges in the Northwest.

W. R. B. Willcox, professor of architecture in the University of Oregon, and a former vice-president of the Institute, has been appointed director of the Oregon summer center.

Oriental art will be stressed at the Oregon center, but the major objective will be the development of proper courses in art appreciation. The students will work in an atmosphere of creative art, and will be free to experiment in studies of painting, sculpture, architecture, and craft.

Among those who will constitute the official lecture staff of the Institute are: C. Howard Walker, Boston; N. C. Curtis, New Orleans; W. R. B. Willcox, Eugene, Oregon; W. L. Steele, Omaha, Nebraska; Professor Goldwin Goldsmith, University of Texas; Louis La Beaume, St. Louis; Professor John Galen Howard, University of California. In addition to lecturing at the colleges which send students to the art centers, they will speak before other educational institutions and civic bodies throughout the country.

STORE BUILDING

Plans have been completed by Messrs. Hardman & Russ, of Berkeley for a one-story brick and tile store building at Newman for A. M. Souza. The estimated cost is $17,000. The same architects have completed plans for two bungalow schools to cost $20,000 for the City of Berkeley.

STATE ISSUES VALUABLE BULLETIN

The California Department of Education, Division of School House Planning, through its executive chief, Andrew P. Hill, Jr., has just published its first bulletin, "Standards for Sanitary Fixtures in Public Schools," which architects interested may obtain at the nominal price of 15 cents per copy. The material will be found of great value to the architect as the following preface would seem to indicate:

"The Division of School House Planning has been hesitant in publishing a bulletin of regulations. This has been due partly to local conditions which vary so greatly that one set of regulations could not be written to cover all cases, partly because we lacked research data on which to formulate sensible requirements, partly to avoid the usual modern tendency to overregulate, and largely because constant pressure of work has negated any possible time for bulletin writing.

"Regulations, however, where simple and usable, are often time savers. For this reason the division will issue from time to time, as conditions permit, statements of principles and standards that should govern certain phases of school planning. These will be illustrated and designed to allow educators and architects to use the material therein, as a reference, with speed and precision."

WILLIAM J. DODD

William J. Dodd, architect of Los Angeles and member of the firm of Dodd & Richards, died June 14 at a hospital in Los Angeles. Mr. Dodd and his wife were making a tour of Europe when he became ill and decided to return home, arriving in Los Angeles early in June. His condition was not considered serious and at his insistence Mrs. Dodd continued on the tour.

Mr. Dodd came to Los Angeles from Louisville, Kentucky, about 18 years ago. His first architectural work was in connection with the *Examiner* Building. He practiced independently for several years before he formed a partnership with William Richards. Together they designed a large number of structures in the central business district, including the height-limit addition to the Pacific Mutual Building and the Associated Realty Building on West Sixth Street.

Mr. Dodd was a member of Southern California Chapter, American Institute of Architects.

DESIGNING MAUSOLEUMS

Plans for two mausoleums are being prepared by Jens C. Petersen of Sacramento at a cost of $75,000 each. They will be built at Willows and Grass Valley.

LOW BUILDINGS OR SKYSCRAPERS?

Most architects seem to believe that the skyscraper will be an even more prominent feature of American cities a century hence than it is today; but Francis Keally, who writes in the *American Architect,* disagrees emphatically.

Within a century, he says, our skyscrapers will largely have vanished. In their place we shall have low, flat-roofed buildings in our cities. Why? Because aviation will have developed so much that there will be a landing field on top of the whole downtown district. The tall spires that mark our cities today will be hazards to aerial traffic, and hence will come down.

Probably many architects will dispute this theory.

ARCHITECT FILES CLAIM

V. W. Voorhees, architect of Seattle, has filed a claim for $27,000 against the City of Seattle, alleging failure to carry out a contract by which he was employed to draft plans and specifications for a city light building. Claim is made that the architect prepared plans for an $800,000 building and that, according to contract, he is entitled to a $48,000 fee, but has received only $21,000.

The building will not be erected on account of the vote of the people authorizing erection on the same site of a private building in which the light plant is to rent space.

TO LECTURE ON EARTHQUAKES

Prof. C. W. Cook will give a stereopticon lecture at the Los Angeles Y. M. C. A., July 31, for the benefit of draftsmen and others who wish to take the examination of the California State Board of Architecture. Professor Cook's subject will be "Earthquakes." He will discuss their causes and effects, explaining the latest method of computing earthquake stresses and offering suggestions for designs that will best resist the tremblors.

FORD PLANT AT RICHMOND

The new Ford assembling plant at Richmond, California, is to be started this summer and completed with all possible speed. Some idea of the size of the plant may be had from the statement that the main building will be approximately 1100 feet long by four hundred feet wide. The plans for the factory were prepared by Albert Kahn of Detroit, Michigan.

RENO HOTEL

Plans have been completed by F. J. De Longchamps, of Reno, Nevada, for a four-story Class C hotel to cost $150,000 for Berango Bros. of that city.

HARVEY WILEY CORBETT SAYS

"We have so separated in the industry that just now we are beginning to realize that we should work together with all of the elements in the industry. It is impossible for an architect to know it all. Why, 50 years ago there were only four walls and a couple of fireplaces. Even the well was outside, as well as the other conveniences. Today a building is a most intricate, complicated, living, breathing thing.

"It has been the idea of some that each fellow does his stuff on a building and the architect comes along like a pastry cook with the little squirt gun and puts pretty decorations on it. The architect must be the guiding hand and he must understand them all in order that his building may be worthy of decoration. If he does this he will find little necessity for decoration. He must think in three dimensions and bring them into line for architectural effect.

"The modern architect is a sculptor of masses."

90 PER CENT GAIN

Fred B. Ortman, vice-president and general manager of Gladding, McBean & Co., reports the orders booked by that company for face brick, terra cotta and tile during the first three weeks of May showed a gain of 90 per cent over those for the corresponding period of April, which he considers as reflecting a definite upward trend in building.

LANDSCAPE GARDENING

Miss Florence Yoch entertained the Los Angeles Architectural Club with a lecture on Landscape Gardening, May 27, at a reception in the showroom of B. B. Bell & Co., 2302 W. Seventh Street, Los Angeles. Her lecture was illustrated with splendid lantern pictures of patios and gardens in Italy, France and England.

ADDITION TO BANK BUILDING

Plans are practically complete in the office of H. A. Minton of San Francisco for a ten-story annex to the Bank of Italy Building at Montgomery and Clay Streets, San Francisco. The structural plans were prepared by L. H. Nishkian, C. E. Estimated cost of the improvements is $300,000.

ANTIOCH SCHOOL

Davis-Pearce Company of Stockton, have been commissioned to prepare plans for the new High school building at Antioch, Contra Costa County, estimated to cost $150,000.

NINETEEN-STORY APARTMENTS

A nineteen-story apartment building is to be erected at the northeast corner of Ninth Avenue and University Street, Seattle, at an estimated cost of $2,000,000.

The Ninth Avenue front is to cover 120 feet, with a depth of 128 feet. There will be thirteen five-room, fifty-five four-room and sixteen three-room suites, with a number of extra apartments for servants.

There will be a roof garden with sun-rooms and observatory. The first five stories will be faced with stone and above will be brick and stone trim. Louis Baeder is the architect.

WANT ARCHITECTS OF ABILITY

A report by William Adams Delano of New York, chairman of the A. I. A. Committee on Public Works and a member of the National Fine Arts Commission, is authority for the statement that the Treasury Department is desirous of using architects of ability throughout the country in developing the Washington Plan and that the Institute had asked the Department to formulate a definite policy in this connection which might be published for the information of the architectural profession.

ENGINEERS OKEH LICENSE LAW

The Seattle Chapter of the American Association of Engineers has approved the proposed law to license all civil, mechanical, electrical and mining engineers.

A resolution has been passed in favor of a board of examining engineers to determine the fitness of all engineers now practicing in the state or desiring to enter the field.

SANTA BARBARA THEATER

A $300,000 theater is to be erected on the site of the old Arlington Hotel, Santa Barbara, from plans by Edwards & Plunkett, 20 East Figueroa Street, Santa Barbara. The Fox-West Coast Theaters, are the lessees.

HOSPITAL AT VISALIA

Plans have been completed in the office of Ernest J. Kump Company, Rowell Building, Fresno, for a new hospital at Visalia for the Kaweah Hospital, Inc. There will be thirty-two beds.

GRANTED CERTIFICATE

Vladimir O. Oglou of 1710 Franklin Street, San Francisco, has been granted a Provisional Certificate to practice architecture in California.

1930 UNIFORM BUILDING CODE

Keen interest in the publication of the Uniform Building Code, 1930 Edition, is being evinced by muncipalities and all branches of the building industry. The code is the third edition prepared and published by the Pacific Coast Building Officials' Conference. Mainly the same as the 1927 or next previous edition, the 1930 edition brings the Uniform Building Code thoroughly up-to-date through the inclusion of recently voted changes.

Through adoption of the Uniform Building Code, seventy-seven cities and towns are now enjoying economies of construction resulting from simplified building practice. The cost of buildings is kept as low as is consistent with safety, at the same time preventing the construction of hazardous buildings such as are all too common under antiquated or hastily assembled building codes. Not only are savings apparent in the first cost of buildings, but the greater protection provided for occupants and contents of buildings results in lowered insurance rates, according to President Plummer.

The seventy-seven adoptions have taken place in three and one-half years, this being the length of time the code has been in existence in book form. Of these adoptions, sixty-nine are on the Pacific Coast and eight are in the Middle West and the South. The cities range in population from less than 1,000 to 300,000.

Intended at first for use by Pacific Coast cities, the code has proven to be so soundly prepared that cities all over the country have asked permission to use it.

Public interest in the code movement is general. Knowledge that proper legislation protects the public by safer construction and by elimination of the operations of the shyster contractor has in several cities brought out a popular demand for the adoption of the Uniform Building Code. Classification of buildings by type of construction and by use and occupancy, permits the application of necessary safeguards for the protection of life and property according to the existing hazard. Standard specifications guarantee the quality of materials. Recognized engineering practices govern details of design.

The following cities are operating under the Code of June 7, 1930:

Alameda, Calif.
Albuquerque, N. M.
Alhambra,* Calif.
Alturas, Calif.
Anaheim, Calif.
Bell, Calif.
Berkeley, Calif.
Birmingham, Ala.
Brawley, Calif.
Calexico, Calif.
Claremont, Calif.
Compton, Calif.
Corcoran, Calif.
Coronado, Calif.
Corpus Christi, Tex.
Cottage Grove, Ore.
Dallas, Tex.
Ellensburg, Wash.
El Monte, Calif.
Eugene, Ore.
Fontana, Calif.
Fresno, Calif.
Fullerton, Calif.
Grand Forks, N. D.
Helena, Mont.
Houston, Tex.
Kelso, Wash.
Klamath Falls, Ore.
Laguna Beach, Calif.
La Habra, Calif.
Las Vegas, Nev.
Livermore, Calif.
Long Beach, Calif.
Madera, Calif.
Martinez, Calif.
Monroe, La.
Monrovia, Calif.
Monterey Park, Calif.
Oceanside, Calif.
Olympia, Wash.
Ontario, Calif.
Oxnard, Calif.
Pasadena, Calif.
Piedmont, Calif.
Pittsburg, Calif.
Pomona, Calif.
Prescott, Ariz.
Redlands, Calif.
Richmond, Calif.
Riverbank, Calif.
Riverside, Calif.
Sacramento,† Calif.
Salem, Ore.
San Anselmo, Calif.
San Bernardino, Calif.
San Fernando, Calif.
San Jose, Calif.
San Leandro, Calif.
San Rafael, Calif.
Santa Maria, Calif.
Santa Monica, Calif.
Shreveport, La.
Seal Beach, Calif.
Sebastopol, Calif.
South San Francisco, Calif.
Tucson, Ariz.
Tujunga, Calif.
Tulare, Calif.
Turlock, Calif.
Tustin, Calif.
Ukiah, Calif.
Upland, Calif.
Visalia, Calif.
Walnut Creek, Calif.
Watsonville, Calif.
Willow Glen, Calif.
Yuma, Ariz.

*First city to adopt U. B. C. (1/7/27).
†Second city to adopt U. B. C. (1/13/27).

STEEL REINFORCING BARS

A proposal to revise the simplified practice recommendation on steel reinforcing bars is now before the manufacturers, distributors, and users of this product for their consideration and signed acceptance, according to an announcement made public by the Division of Simplified Practice of the Bureau of Standards, Department of Commerce.

The original recommendation, as adopted by all interests, effected a reduction in the number of cross-sectional areas of reinforcing bars from 32 to 11. The equivalent cross-sectional area for each of the 11 sizes retained was expressed to three decimal places.

The revision, proposed by the standing committee of the industry, will limit the equivalent cross-sectional areas of the bars to two decimal places.

This modification was recommended as a means of further simplifying the work of engineering design where reinforced concrete is used and if accepted by the industry will be effective September 2, 1930.

OLYMPIC CLUB BUILDING

John Baur, Arthur Brown, Jr., and John Bakewell, Jr., associated architects for the new Olympic Club Building in San Francisco, announce that the working drawings are very nearly completed and that bids undoubtedly will be taken early next month. The twenty-five story structure will represent an investment for building and equipment of more than $4,000,000.

SOCIETY and CLUB MEETINGS

LIVELIEST CHAPTER IN INSTITUTE

At the June 17th meeting of Southern California Chapter, American Institute of Architects, Edwin Bergstrom stated that at the Washington convention the Southern California Chapter was looked upon as being the liveliest chapter in the Institute and was the most prompt in submitting reports. He also said that the two big problems facing the Institute were the educational program, or the manner in which funds will be disbursed for educational purposes, and the status of membership.

Myron Hunt said that it was now an accepted fact that the American Institute of Architects is doing more for the allied arts than any other organization. He also stated that the Institute's financial outlook was extremely bright.

Charles H. Cheney gave a report on public information and the progress that has been made by the committee handling that work.

Interesting reports on the convention and places visited were made by each delegate. Next year's national meeting will be held in San Antonio, Texas.

Carleton Winslow, vice-president of the local chapter, welcomed and introduced recently elected associate members. They are: John D. Atchison, G. B. Brigham, Jr., Mark Daniels, H. Scott Gerity, William H. Kraemer, David A. Ogilvie and Heth Wharton.

The death of William J. Dodd, a member of the local chapter, was announced and a resolution expressing the sorrow of the chapter was adopted by a rising vote.

H. C. Chambers, who presided at the meeting, announced the following committees appointed to work with the State Board of Architectural Examiners in setting up the requirements and standards to be used in connection with examinations for architects' licenses: Professional Standards Committee—A. M. Edelman, chairman; Myron Hunt, Sumner P. Hunt and William Richards. Committee on Design—Sumner M. Spaulding, chairman; Fitch H. Haskell, D. C. Allison and Palmer Sabin. Engineering Committee—Roy T. Mitchell, chairman; Robert H. Orr, A. C. Zimmerman and H. G. Spielman. Committee on Practice—R. D. MacPherson, chairman; J. E. Allison, Claud Beelman and Frederic M. Ashley.

The July meeting of the Southern California Chapter will be held jointly with the Santa Barbara Chapter in Los Angeles, at which time the work of the late George Washington Smith will be exhibited.

ECHOES OF THE CONVENTION

Carleton M. Winslow, delegate from Southern California Chapter to the recent A. I. A. convention in Washington, gave a brief report of the gathering to his fellow members at the June meeting of the Chapter at Los Angeles.

Those in attendance from the Southern California Chapter were: Myron Hunt, member of the National Board of Directors; Edwin Bergstrom, treasurer of the National Institute; David J. Witmer, A. M. Edelman, William Richards, Charles H. Cheney, Eugene Weston, Jr., Palmer Sabine, and Carleton M. Winslow.

Mr. Burkett, representing the Santa Barbara Chapter and Messrs. Seibert and Gill, representing the San Diego Chapter, were also present.

Mr. Winslow's report in full, follows:

"The program of the convention was closely followed by your delegation. In fact, attendance on the part of the full delegation to the convention was remarkably complete and this full participation added much to the interest in the various numbers on the program. And this, notwithstanding the fact that there was no feature of outstanding interest to present to the convention.

"The presiding ability of C. Herrick Hammond, the outgoing president was, as ever, of great skill and interest. In the opinion of the writer, Mr. Hammond's success as the occupant of the most important office in the gift of the Institute will remain in our memory for a long time.

"The report of the treasurer, Edwin Bergstrom, was a summing up of the affairs of the Institute for the past year. Mr. Bergstrom's report is not only a presentation of monetary facts but a running commentary on the activities of the Institute.

"The Symposium on contemporary architecture by Charles Butler was probably of the greatest interest of any of the special features presented. The subject started in chaos and ended in nebulosity without stimulating a single architectural emotion in the breasts of the audience. Whether or not "Art Moderne" as it is dubbed, is representative of our day and age remains for future generations to judge. In criticism of the 'Precedents' one speaker remarked that the

Parthenon is not relative to the life of today. I am not sure that it had any specific relation to the life of the Greeks at the time it was built, excepting possibly that of the educated and ruling class.

"By analogy, Heaven help us if in future days the intellectualism of A. D. 1930 is to be estimated by some of the awe-inspiring creations which are rising up about us!

"After all, the whole subject is rather footless. Neither discussion nor legislation will bend nor shape the trend of architectural design. The wind of architectural design bloweth where it listeth, we know not when it comes nor whither it goeth; our only lookout is not to let it blow dust in our eyes.

"C. Howard Walker's concluding remark was 'and in the end the best of it resembles the past.'

"George Howe's contribution was a witty aggregation of aphorisms gently ridiculing the past because of its inadequacy in fulfilling the functions required of it for expressing the present. All in all, the subject seemed more a target for wit than for wisdom.

"The announcement of the forthcoming International Congress of Architects at Budapest made at the morning session of May 23rd should be followed with careful interest by the Institute at large and our Chapter in particular and it is my recommendation that means be devised for sending representation to this Congress by the Southern California Chapter.

"The balloting for officers for the forthcoming year was of considerable interest, resulting in the election of Robert D. Kohn as president.

"Harris Allen, of San Francisco, our choice for Regional Director for the Sierra Nevada Division, gracefully withdrew his name for the office before the nominations were closed and that of Frederick H. Meyer of San Francisco was substituted by caucus of the Regional chapters as a whole.

"Speaking for himself the writer wishes to express his appreciation for the honor accorded him by the Chapter as delegate to this convention. It is recommended that in the future, delegates be selected so far as possible in rotation that the whole Chapter may participate in the affairs of the national body."

POCHE ARCHITECTS' CLUB

The following officers were elected by the Poché Club of Seattle at its annual meeting, May 8th: President, Paul Thiry; first vice-president, James Sweeney; second vice-president, Richard J. Pearce; secretary, Frank Wynkoop; treasurer, Harry Myers; sergeant-at-arms, Barney Moe. Meetings are held the first and third Thursdays of each month. The first session is purely social, for members only, with Dutch dinner. The second meeting of the month is business affairs and guest dinner.

The club is an outgrowth of the atelier formerly connected with the Art Institute, where Beaux Arts problems were studied. The Poché Club was founded in 1929 with Frank Wynkoop as president.

Rehabilitation of the club's quarters in the basement of the Art Institute is one of the chief tasks outlined for the coming year.

NORTHERN CALIFORNIA CHAPTER

The monthly meeting of the Northern California Chapter, A. I. A., was held at the Clift Hotel, San Francisco, on the evening of Tuesday, June 10th, the date having been postponed from the regular time of May 29th, on account of the absence of delegates to the yearly convention in Washington, D. C.

Announcement was made of the distinction conferred upon William C. Hays and Arthur Brown, Jr., members of this Chapter, in being made Fellows of the American Institute of Architects, and the pleasure of the Chapter was extended to them with appropriate ceremony.

An amendment to the By-laws, providing for membership classification, designated as "Junior Associate" of the Northern California Chapter, the American Institute of Architects, was presented, and being regularly moved and seconded for adoption, was unanimously carried.

Four of the number of delegates who attended the 63rd A. I. A. Convention, held in Washington, D. C., were present and favored the meeting with a most interesting recital of the activities of the Institute, and matters transpiring at the convention.

Harris C. Allen, presented a report of the general transactions and program and in turn was followed by Albert J. Evers, Wm. C. Hays and Warren Perry, who recounted particular features and the recommendation of the Institute in matters pertaining to Public Information, City and Regional Planning, Allied Arts, Public Works, National Capitol, Contemporary Architecture, Education, and Historic Monuments.

Announcement was made of the unopposed election in the convention of Frederick H. Meyer, as Director of the Sierra Nevada Division.

President Meyer announced the election of William P. Day and John K. Branner as Institute Members, and their assignment to the Northern California Chapter.

There being no other business, Mr. Meyer turned the meeting over to Mr. Evers, who presided for the remainder of the evening, as chairman of the program.

G. Albert Landsburgh presented a paper dealing with the fundamental requirements of heater design, wherein was stressed the primary elements of vision, audition and practical circulation and their relative importance in the order of stating.

Vision was rated over audition because the better one sees, the better one hears and the assistance of seeing lip movements to help catch the sound, linked these two features closely together.

By practical circulation, there may be acquired ease of seating, and egress, with added safety to audience, and economy to the management because of the less number of attendants required. The manner of determing perfect acoustics and the importance of proper ventilation were also dwelt upon.

The speaker enlarged upon the particular requirements of the opera house, the dramatic theater, and the movies, and spoke of the changes and relative development of each, with the present tendency for smaller practical arrangement of loges and mezzanines.

Mr. Landsburgh was followed by Andrew P. Hill, whose position of architectural advisor to the State Board of Education well qualified him to outline the fundamental requirements of good school design.

The difficulty of acquiring good schools in rural areas on account of the limitation of appreciation and leadership in many school boards, is one of the problems confronting these districts. In areas of larger population and development, Regional Planning has been of marked assistance in the social development of the community and has been instrumental in instilling a desire on the part of the school boards and the public to secure better schools.

Features of practical necessity were pointed out as fundamental requirements and the value of better planned and constructed buildings was emphasized for the economy of maintenance, supervision and safety.

The formal nature of education thirty years ago was compared with the informal method of today which tends towards a better understanding of the needs of the child. This development is a determining factor in establishing the type of building to be provided for present school purposes.—J. H. M.

S. F. ARCHITECTURAL CLUB

The June meeting of the San Francisco Architectural Club was held in the club rooms, at 523 Pine Street The nominating committee's report was accepted, to be voted upon at the next meeting. The nominations were as follows: Treasurer, S. C. Leonhauser; for directors, C. J. Sly and W. E. Mooney. Dud Marsh was elected to membership.

There was a great deal of discussion in regard to the "Esquisse," the club bulletin, and the editor made an appeal for more material. It is hoped the appeal will be answered, as the bulletin is a great asset to the club.

It was decided not to have the by-laws printed at present, but to have a copy on file in the club-rooms for those who wished to see them.

Al Williams announced that R. W. Ferguson and C. J. Harkness had tied for the prize given by the Detail Class.

An interesting film, showing the manufacture and application of porcelain tile, was projected as a concluding number on the entertainment bill.

* * * *

Following is the schedule of the problems of the class in Elementary Design:

Shades and Shadows, July 22nd and 24th.
Problem No. 3, July 28th.
Shades and Shadows, Aug. 12th and 17th.
Problem No. 4, August 18th.
The dates given for the problems are for the esquisse.
Two weeks are allowed for the same.

* * * *

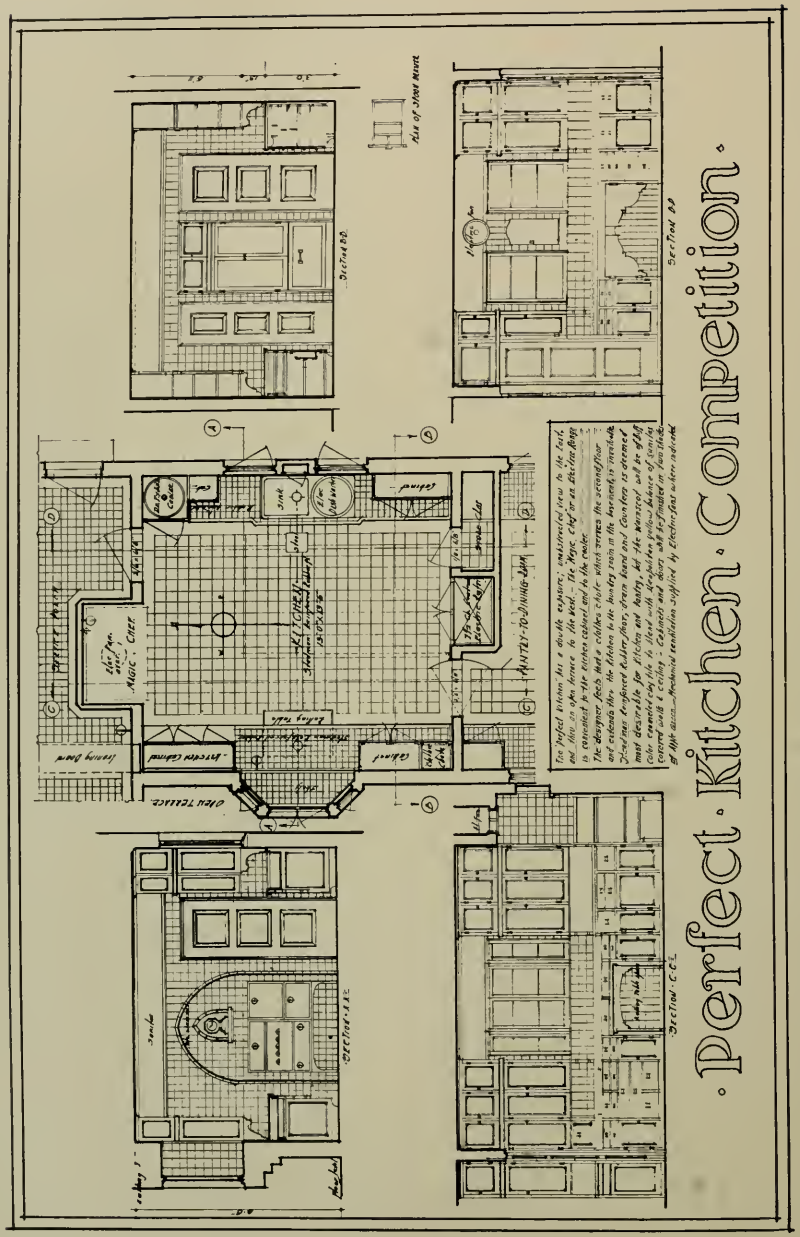
The schedule of the Summer Class on Preliminary Design has been completed. No doubt some remember the rather successful class we had last summer. Still, this time the class should be more successful, due to the fact that there will be at least two more instructors and because the Summer Beaux Arts Problem being done by the regular Atelier boys will furnish the starters with a fine opportunity to nigger, get into the Atelier spirit and learn the tricks of the trade.

The course will be divided into two main branches. Presentation of Design, rendering, use of documents, etc., will be impressed upon the youngsters by lectures and practice sheets given by Massier Ciampi. The very important study of Shades and Shadows will be thoroughly covered by Oscar Price.

On Friday, June 27th, the Engineering class dinner was held. There was a good attendance and an enjoyable time was had.

ILLUMINATING ENGINEERS

The twenty-fourth annual convention of the Illuminating Engineering Society will be held in Richmond, Virginia, from October 7th to 10th, with headquarters at the Hotel John Marshall, according to an announcement made public by the Society, 29 West Thirty-ninth Street, New York City.



The above perfect kitchen design, submitted by Miss Muriel E. Nicholais, 18-year-old architectural student and recent graduate of Beverly Hills High School, won first prize in the professional class of a competition sponsored by the Architects' Building Material Exhibit, Los Angeles. The perfect kitchen has a double exposure; unobstructed view to the East and through an open terrace to the West.

THE ARCHITECT COMES TO HIMSELF

by L. G. Scherer, *Architect*

(An address delivered before the Architects' League of Hollywood)

ARCHITECTURE in past generations, to a considerable extent, rested on the patronage of the few, developed as the estate of aristocracy. It was recognized primarily as a fine art only. This condition limited its general appreciation and democratic development—hence, it could well afford to maintain a disdainful dignity and aloofness. Today, however, architecture is attaining maturity; it is becoming the great cosmopolitan art, and may become one of the greatest means of human betterment and happiness. It therefore requires the intelligent appreciation and understanding of the layman. Our present-day architectural problems demand the cooperation of the layman. The tenement house (the industrial house), is as important an architectural problem as the church. All architectural problems involve sociological considerations, and affect intimately the lives of common humanity. Man has professed democratic ideas, but in the matter of architecture his behavior has been quite comparable with that of aristocratic times, when respect was paid to birth, and not in times when we are trying to cultivate respect for common humanity. If it is to fulfill its mission in the community, it must fling aside its apologetic veil of dignity, aloofness, and be willing to assume its place among the other positive forces of society. Architecture has a significant, fundamental, a comprehensive service to render. Shall the layman, because of an antiquated ethical attitude, remain ignorant of it? Is there any inherent necessity for the continuation of traditional standards that thwart the profession's growth and usefulness?

After decades of apparent lethargy, during which time the architect neglected to give publicity to his profession, he became more or less misunderstood and undervalued. Now the architect arises to claim his merited position in the professional world. He awakens to the realization of a competitive world in which professions, like individuals, must assert themselves to live, to completely fulfill their destiny, or ultimately perish. He is aware that publicity is to business what electricity is to industry—its force, its generating power, its life. Architecture as the arbiter of good taste and judgment in planning and building, should not be content to wait for the community to come to it for guidance. An integral and vital part of the architect's work is to go into his community and preach the gospel of good taste, of logical planning, and awaken people to the ugliness that everywhere engulfs them; educate them to demand finer esthetic values; make them cognizant of the economic necessity of his profession. Charles H. Cheney of the American Institute of Architects makes this startling assertion: "Three-quarters of all the new building done in this country last year was so ugly, so poorly planned and so badly located as to have been a liability rather than an asset, almost from the day of completion. Stated in figues we have spent four billion dollars on new structures—of this, three billion dollars worth was improvidently spent." The greatest economic waste of our time is the waste which results from man's indifference in selecting intelligent and competent assstance in solving his problems. When we discover that less than 15 per cent of the new buildings are planned by competent architects, we have found the key to the ugliness and clumsiness of our buildings. We are now coming into a new age when we must not only conserve the material and cultivate the spiritual and ethical values, but educate the layman to the importance of the architectural profession, raise the standard of his taste and create in him an appreciation of beauty as well as utility. We will thereby add greatly to the dignity, to the beauty, and to the happiness of the externals of life.

To achieve this, a thorough educational program must be seriously undertaken and enthusiastically prosecuted. Its success rests entirely upon intelligent regimentation, spirited and effective cooperation on the part of every man identified with the profession. The program requires the active financial, as well as personal support of every architect, both through local and national architectural educational organizations. The campaign to establish the intrinsic status of architecture has become national—it is gaining momentum. It should! Because its objective is altruistic and unselfish, dedicated to the common good. The question of thus educating the public is not merely a passive obligation, but a definite duty. If architecture can render valuable esthetic, practical and economical service, it owes it to itself and to the com-

munity, to make its importance known and understood. It thus becomes an unselfish movement, because the public shall profit by it—profit significantly. And yet its benefits to the individual architect will be far greater than anticipated, not because it will gain him a more favorable livelihood, but because it will gain for him a broader life, and make him a finer citizen, a better man and architect. He will have "come to himself."

He will have come to himself, because it will awaken in him the high purpose of his profession—the vital part it plays in the program of civilization—its fundamental necessity, its universal importance. I see him arising a new man, coming to a full realization of his powers—a true and clearer perception of who and what he is, developing that necessary faculty of self-confidence, which seems to have become dwarfed within him. He will begin to intelligently and enthusiastically assert himself, and regulate to oblivion the damaging negative complex that has prostrated him in the past. The consciousness that his profession is attaining a position of high regard in the eyes of the world, that its importance is being generally recognized, will make a better architect of him. Once he regains his professional self-respect, his self-confidence, his enthusiasm, we can expect bigger, better and greater things from him. This condition can be achieved only through whole-hearted, concerted, intelligent effort; and every architect, irrespective of past achievements, and every individual identified with the profession, should unite and do his part in the furthering of this worth-while program. It becomes his sacred duty! Such a program will culminate not only in a tremendously profitable investment, but will bring to architecture the recognition that it merits.

CENSUS SHOWS 100,000 CONTRACTORS

Approximately 175,000 report-blanks already have been distributed in the Census of Construction canvass and Dr. Alanson D. Morehouse, Chief of the Construction Section, Distribution Division, U. S. Bureau of the Census, is of the opinion that the number of contractors and builders who did at least $25,000 worth of construction work last year will range from 75,000 to 100,000.

Undoubtedly questionnaires were sent to contractors who did not do that much business last year, and many contractors were missed, but all those errors will be eliminated by the personal canvass now under way. The Construction Census canvass was conducted entirely by mail until recently, when, in all cities of more than 10,000 population, it was turned over to the supervisors and enumerators for completion through personal visits.

Both general and subcontracting work are included in the census. The general contracting work includes such construction as building, highway, bridge and culvert, street paving, sewer, gas, water, and conduit, dam and reservoir waterworks, dredging, river and harbor, levees, railroads, foundation, power plants, and various other work, while subcontracting includes carpentering, concreteing, electrical, elevator construction, heating and piping, masonry, painting and decorating, glass and glazing, pipe covering, plastering, plumbing, roofing, sheet metal work, steel erection, stone work, marble and tiling, wrecking, excavating, ornamental iron and various other similar work.

For the purpose of this census, repair work and remodeling work are considered on the same basis as new construction, because such work utilizes construction materials and construction labor.

The number of report-blanks mailed to contractors in the various states follow:

Alabama, 857; Arizona, 634; Arkanas, 791; California, 18,956; Colorado, 1704; Connecticut, 5318; Delaware, 373; District of Columbia, 1117; Florida, 2342; Georgia, 1014; Idaho, 325; Illinois, 10,550; Indiana, 4269; Iowa, 3322; Kansas, 1907; Kentucky, 1312; Louisiana, 1074; Maine, 1059; Maryland, 2674; Massachusetts, 9900; Michigan, 8030; Minnesota, 3808; Mississippi, 522; Missouri, 4226; Montana, 505; Nebraska, 1783; Nevada, 223; New Hampshire, 885; New Jersey, 8339; New Mexico, 243; New York, 26,919; North Carolina, 957; North Dakota, 665; Ohio, 10,380; Oklahoma, 1549; Oregon, 1423; Pennsylvania, 14,783; Rhode Island, 1463; South Carolina, 652; South Dakota, 597; Tennessee, 1677; Texas, 4995; Utah, 634; Vermont, 411; Virginia, 1504; Washington, 2095; West Virginia, 934; Wisconsin, 5807; Wyoming, 212.

GOVERNMENT BUILDING ESTIMATES

According to Julius Klein, assistant secretary of the Department of Commerce, government economists have increased their construction estimates for this year by another $1,000,000,000 making the total $11,000,000,000.

This construction bill for 1930 represents public and private building and maintenance, including the activities of public utilities. The increase in the estimate is almost entirely in the field of commercial and industrial structures and other private operations.

Mr. Klein also estimates that federal expenditures for 1930, for building and ground improvements, will amount to between $60,000,000 and $70,000,000.

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"ANYONE WHO KNOWS HOW"

By FLOYD MUELLER in *The Lintel*

ALL architects who do residential work have had the heart-breaking experience of seeing their brain-child ravished by the interior decorator, and most decorators have been called upon to furnish and decorate rooms whose plan and color present an almost impossible solution. For this reason the two snap at each other, and underestimate the importance of the other in the scheme of things.

The ideal situation would be for one man—architect or decorator—to design, build, furnish and carry out the complete decorative scheme. The logical person would, of course, be the architect, but such a service would involve a tremendous amount of detail on his part and would necessitate an entire separate unit in his organization, and an expensive one which only a great deal of work could justify.

Architects are fundamentally interested in composition—the disposition of solids and voids, and in the analyzation of the requirements of the building, and as a rule, are only superficially interested in color. Little architectural effect should be striven for in the interior of the average home. It is the furniture, draperies, rugs, which lend the charm and atmosphere to a room. A barn properly furnished can have an infinite amount of interest, whereas the most palatial room stupidly furnished can be utterly devoid of charm. There is much to be considered in planning a room from the standpoint of furnishing.

The two greatest faults of the architect are his over-indulgence in windows and doors, which kill so much wall space, and a predilection to put wall registers in the center of what wall space is left. A room in which these things have been considered, and in which the walls are extremely unobstrusive as to color, is a joy to the decorator.

The decorator is, of course, unqualified to be this unusual genius, unless he has had a thorough training in architecture. Such examples are undoubtedly rare. The decorator does not, as a rule, approach his problem in a professional manner, since he is fundamentally a merchandiser. On the other hand he has lived among lovely fabrics for so long, that color plays an important part in anything he does, and it is this angle that makes him valuable to the client.

Until custom-made furniture came into vogue, both the architect and the decorator were handicapped because it was nearly impossible to find enough antiques to meet all the requirements of a room, and the substitution made with factory furniture made a most discordant note. The question now arises, "who shall design the furniture?" The answer is "Anyone who knows how." The designing of furniture has its problems and the successful piece has its substitutes, which only experience can achieve.

The logical solution to the designing and furnishing of the successful house is the collaboration of the

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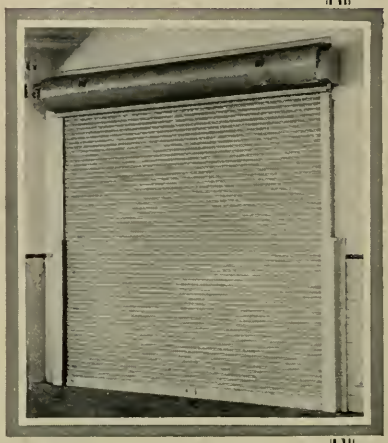

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architect and the decorator—both working with the client from the inception of the job. This means the selection of the decorator at the same time that the architect is chosen. The two, working together, should be able to produce a finished picture satisfactory to all.

SHODDY WORK IS COSTLY

Careless and cheap construction is a pretty costly proposition. An article in *The American Architect* points out that fire losses, due to that kind of shoddy work in American building, run around $76,000,000 a year.

"Defective chimneys and flues, stoves, furnaces, boilers and pipes cause about 10 per cent of the total yearly fire loss," says the magazine. "Carelessness in handling electricity caused a loss of about 3 per cent of the total. Much of this was due to improper wiring and overloading of circuits."

The jerry-builder is a nuisance in more ways than one. The houses he puts up are usually eye-sores, and are invariably less comfortable and snug than the home-owner has a right to expect. Now comes this evidence that this type of builder is directly responsible for the enormous yearly fire loss.

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"THE PASSING OF THE IRON PUDDLER"

The picture of the iron puddler, scion of an ancient and honorable trade, whose earliest recorded forbear is referred to in Genesis as Tubal Cain, "the forger of every cutting instrument," is passing at last from the industrial scene.

In its place there is rising the new picture of the same workman standing behind and controlling a machine that performs this back-breaking task for him.

Metallurgists without number throughout the world long have sought some means of producing wrought iron in quantity and without the aid of the puddler. A heavy file in the patent office at Washington offers testimony to the efforts of some of those who have tried, and failed, to produce by other means the magic wrought by fire and nature in the little hand furnaces.

For years it has been recognized that the puddler's limitations included much more than the restrictions of production enforced by the limits of physical strength and endurance. The puddler's labor, his strenuous mixing of pure molten iron and silicate slag in the

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white heat of his furnace, was not what gave wrought iron its rust-resisting grain and imperishable qualities. He did not "make" wrought iron. He merely provided conditions that induced a natural phenomena, the transformation of materials. There's mystery in it and this mystery—what, beyond the kneading of the materials and the purging heat, caused the flaming batch to "come to nature"—is what has baffled a long line of experts throughout the years.

Dr. James Aston, director of the department of mining and metallurgy of Carnegie Institute of Technology, is a quiet man. For years he has sought the secret of the puddling furnace. When all other attempts failed, he took his problem to his chemical laboratory. The story of his efforts, of his disappointments and of his final success, is a saga in itself.

Where others tried to find some mechanical substitute for the manual labor of the puddler, Dr. Ashton reversed the procedure and marshalled the precise laws of chemistry upon the problem of discovering the mysteries of this metallurgical phenomena.

He succeeded so completely that the wrought iron now being produced by his process is of even superior quality to the time-proven product of the puddler's furnace. The laws of chemistry are inflexible and so Dr. Ashton's process has eliminated all the elements of chance and the uncertainties of the old, manual method. The metallurgical phenomena he induces is permitted to go through its complete course and therefore the wrought iron he produces in quantities heretofore held impossible is of unvarying quality.

Acclaimed by the foremost metallurgists throughout the world, tested and accepted by such authorities as the United States Bureau of Standards, the American Society for Testing Materials and the Federal Specifications Board, Dr. Ashton soon is to take a brief vacation from his lecture rooms to witness the opening of a new twelve-million-dollar plant being built by the A. M. Byers Company in the Pittsburgh district for the utilization of his invention.

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MILCOR STEEL COMPANY NEW NAME

A change in name that will affect large manufacturing and distribution plants located in five of the country's principal cities, and also affect branch offices at strategic points throughout the country, is announced by the Milwaukee Corrugating Company. Effective July 1, 1930, the Milwaukee Corrugating Company and subsidiaries became known as Milcor Steel Company.

For more than a quarter of a century the trade name "Milcor" has been familiar to the building industry. The adoption of the trade name as the firm name is in line with a recent trend followed by many nationally prominent manufacturers.

"We have found a change in name necessary for two reasons," commented Louis Kuehn, president of the company. "First, our factories manufacture so many metal building products, besides corrugated steel roofings that the corrugating company name is representative of but a small portion of our business. We purchased the Eller Manufacturing Company, Canton, Ohio, about two years ago. Since then, that concern has been enlarged and equipped to distribute all Milcor metal building products. And the other reason for the change in name at this time is to bring the Eller Manufacturing Company and the Milwaukee Corrugating Company in the same manufacturing group, as far as the trade and the public are concerned. Hereafter it will be the Milcor Steel Company."

The tremendous growth and development of the Milwaukee Corrugating Company is a fascinating story. Starting in 1902 the company began the manufacture of corrugated metal roofing and other sheet metal building products. In five years' time the demand for these products in the central states grew to the point that a branch plant was established in Kansas City, Missouri. Six years later, in 1913, the company built an entirely new plant in Milwaukee, changing its location from the south to the southwest side of the city.

In years following, patented processes of manufacture were developed, which enabled volume production, and a great many new types of metal building products were created. Chief among these are the firesafe building products, comprising an imposing number of structural items such as expanded metal lath, expansion as well as other types of corner beads, expansion window casings, metal base screeds, picture moldings, structural steel domes, etc.

Equally important firesafe products are embossed metal ceilings in several designs, Spanish texture ceiling and walls (a new Milcor creation), and skylights, cornices, metal windows, ventilators, Spanish tile, metal shingles and roof trimmings, architectural ornaments, conductor pipe heads and bands, and gutters. Milcor also manufactures a complete line of products.

for warm air heating, such as stove pipe, furnace pipe, registers, stove pipe elbows, and other accessories.

The combined plants of the Milcor Steel Company will have almost a million square feet of floor space, and its properties cover forty acres of land. The company is one of the largest consumers of steel in Milwaukee.

Due to its exceptional manufacturing facilities, Milcor is prepared to give 24-hour service on all articles made. Plants with complete stocks at strategic locations extend the best of shipping service to Milcor customers.

WHY BUILDERS GO BROKE

Edward D. Stout, manager of the Credit Association of the New York Building Trades, says that when builders fail to make good there is a reason. In fact, there are many reasons; and there are as many varieties of troubles that lead to failure as there are trades in the building industry.

In *Building Age* for May Mr. Stout says that among the elements to cause failure can be enumerated: incompetence, inexperience, overreaching a man's ability, lack of cooperation among the different branches of the industry, dishonesty. The latter is no more prevalent in construction than in any other branch of business—and the percentage is small.

Incompetence is a cause of failure involving not only contractors but sub-contractors and others all down the line. The chances of the incompetent one to take on building work are frequent because of the lack of control that municipal and other bodies have in forcing completion of work.

Inexperience is a frequent cause of failure because a man may see an opportunity of doing something more than he has ever done before. Consequently, he takes a chance not only on conditions breaking to give him a fair show, but on getting paid after the work is done.

The overreach of builders and others in the industry is a phase of the gambling spirit, which is prevalent in every phase of American business. Without a proper margin, building is not safe, and failures result.

There have been cases where big speculative operators have been attempting to build with margins of 10 per cent or less. Some of these, by a fortune of circumstances, are successful. That encourages the others.

A man today cannot trade in Wall Street, where the market is always available for the sale without delay, on such a small margin as 10 per cent. And when one is undertaking a building operation on so small a margin, he is riding for a fall. There have been more failures in the industry because of the lack of backing than through any other cause.

Severity of competition is a frequent cause of failure for the reason that it leads men to sell material and labor at a price that does not give them a sufficient

Wood Floors Last—No Dry Rot Guarantees Secure Sleeper Anchorage

STEP SIX—LAYING WOOD FLOOR. *After sleepers are securely in place, wood floors are laid. Sleepers and floors are laid without waiting for fill to dry.*

THE Bull Dog Method of anchoring wood floors over concrete *eliminates dry rot.* This doubles floor life, for, because of dead air space, sleepers do not deteriorate. If desired, concrete headers can be placed at intervals.

Other points in favor of the Bull Dog Method are: no fill to dry, no beveling or shimming, sleepers and finished floor laid at same time; reduction of dead load 18,000 lbs. to 1,000 square feet of slab area; permanent and secure anchorage, preventing buckling, squeaking and doming. The Junior Clip (5/8" wide) may be used with or without a fill (dependent on the service duty of the floor.) When a fill between the sleepers is desired, any cheap, inexpensive mix such as sand, cinders or cinder concrete can be used.

Millions of BULL DOG FLOOR CLIPS on over 8,000 jobs carry testimony of satisfaction. Made for 2, 3 and 4 inch sleepers. Regular and Junior Styles. Friction tight nailing facilities (nails gratis.) Write for catalog and samples.

THE BULL DOG FLOOR CLIP CO.
108 N. First Ave., Winterset, Ia.
135 Representatives—15 Warehouse Stocks

BULL DOG Floor Clips

REGULAR CLIP—*3 sizes, 2, 3 and 4 in. 20 gauge galvanized iron.*

Original Patent granted June 14, 1921
Reissue Patent granted June 29, 1924
Process Patent granted May 19, 1925

JUNIOR CLIP—*3 sizes, 2, 3 and 4 in. 18 gauge galvanized iron.*

The Bull Dog Buck Anchor

THE Bull Dog Buck Anchor forms a rigid truss in the mortar joint which prevents the movement of the buck in any direction. It eliminates the use of nails, screws, bolts, tie-wires, strips of metal lath and iron, and all pounding against the back sides of the buck. Made in three widths of No. 10 Galvanized Steel Wire: 3 in., 4 in., 6 in. Ten per cent of anchors in packing cases are shorts to take care of spaces too short for the regular size anchor.

RIC-WIL CONDUIT
makes for economical and speedy installations

After trench is graded, lay Ric-wiL Base Drain end to end like dominoes — the center head serves as an alignment guide. Wedge Pipe Support saddles between every sixth section.

Set on bottom conduit sections — every sixth section has a pipe support hole. Install and test the pipes — exceptionally easy, as the pipes are in the open.

Pack Dry-paC Filler around pipes, put top conduit section in place, cement bells and Loc-liP Side Joint. Job is ready to backfill.

And tests of Ric-wiL installations show an efficiency of from 92% to 94%—ample assurance of better than 90% efficiency. Can you afford to gamble on less?
Write today for more detailed information on Ric-wiL Underground Conduit installations.

THE H. G. SPERRY COMPANY
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RIC-WIL
UNDERGROUND CONDUIT

Stairway of Tunisian Tile with Floors and Steps of Fallston Tile
Santa Barbara Courthouse
WM. MOOSER, *Architect*

Showing the Value of Decorative Tile
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Manufactured by

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Everything in Tiles

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Los Angeles

profit and does not warrant the taking of any chances. Irresponsible operators without sufficient resources behind them take advantage of the severe competition, secure the work done at ruinous prices for the subcontractor, and if the building operation is not successful, suffering and failure follow all down the line.

Looseness of credit granting encourages reckless building operation and the resulting failures that often follow. Credit is granted in the building industry in thousands of cases where it is not warranted, and a tremendous number of the concerns in the industry are so loose in their business methods that credit is given where it should not be, and losses follow as a matter of course.

The lack of proper financing in speculative operations is one of the most serious dangers at the present time; and the trade, consisting of the superintending builder, the materialman, and the sub-contractor, is itself to blame for furnishing labor and materials where credit is not warranted and a definite financial backing is not shown.

The building industry has passed through two years of stress and strife. The roadway is strewn with the wrecks of prosperous contractors, sub-contractors and others who have been taking chances that were far worse than the chances taken by speculators in Wall Street.

Whether the lesson in caution in the building industry has been learned may be questioned, as there are still indications of an overanxiety to secure business whether or not a reasonable profit can be obtained.

Just what contractors are thinking about when they accept work at figures so low that no profit is forthcoming I cannot imagine. But they do, and as a result they add to the total of failures every year.

TIME TO BUILD

(Editorial in *San Francisco Chronicle*)

A California banker, who puts a great deal of money into mortgages, has made some interesting comparisons between present building costs and those at the peak.

He finds that a house built in 1923 at a cost of $13,000 can now be built better for $11,500. Another built in the same year for $12,000 could now be put up for $10,200. And a branch bank office that cost $8.43 per square foot is worth about two-thirds of the value of one just completed for $9 a square foot.

There is no guesswork about these figures, for this banker is the one who put up the money for the operations in question. He has money to lend now on mortgages and he prefers to put it into new construction at low costs than into financing older properties created at peak cost levels. This gives significance to his advice to "Build and build now," and to his query, "How long can you wait to build?"

Building costs are down but without cutting wages. Prices of some materials have dropped, but even this

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts quoted are figuring prices and are made up from average quotations furnished by material houses to three leading contracting firms of San Francisco.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

Overtime in wage scale should be credited with time and a half, Sunday and holidays double.

Bond—1½% amount of contract.

Brickwork—
Common, $30 to $36 per 1000 laid, (according to class of work).
Face, $80 to $110 per 1000 laid, (according to class of work).
Brick Steps, using pressed brick, $1.00 lin. ft.
Brick Walls, using pressed brick on edge, 65c sq. ft. (Foundations extra.)
Brick Veneer on frame buildings, $ .90 sq. ft.
Common, f.o.b. cars, $13.00 plus cartage.
Face, f.o.b. cars, $45.00 per 1000, carload lots.

HOLLOW TILE FIREPROOFING (f.o.b. cars in carload lots).

3x12x12 in.	$ 94.00 per M
4x12x12 in.	106.00 per M
6x12x12 in.	154.00 per M
8x12x12 in.	235.00 per M

HOLLOW BUILDING TILE (f.o.b. cars in carload lots).

8x12x5½	$108.00
6x12x5½	74.00

Composition Floors — 18c to 30c per sq. ft. In large quantities, 18c per sq. ft. laid.
Rubber Tile—65c per sq. ft.

Terazzo Floors—50c to 60c per sq. ft.
Terazzo Steps—$1.50 per lin. ft.
Mosaic Floors—80c per sq. ft.

Concrete Work (material at San Francisco bunkers) — Quotations below 2000 lbs. to the ton.

No. 3 rock, at bunkers	$1.40 per ton
No. 4 rock, at bunkers	1.40 per ton
Eliott pea gravel, at bnkrs.	1.40 per ton
Washed gravel, at bnkrs.	1.40 per ton
Eliott top gravel, at bnkrs.	1.40 per ton
City gravel, at bunkers	1.40 per ton
River sand, at bunkers	1.00 per ton
Delivered bank sand	1.00 cu. yd.

Note—Above prices are subject to discount of 10c per ton on invoices paid on or before the 15th of month, following delivery.

SAND
Del Monte, $1.75 to $3.00 per ton.
Fan Shell Beach (car lots, f.o.b. Lake Majella), $2.75 to $4.00 per ton.
Cement, $2.44 per bbl. in paper sks.
Cement (f.o.b. Job, S. F.) $2.64 per bbl.
Cement (f.o.b. Job, Oak.), $2.64 per bbl.
Rebate of 10 cents bbl. cash in 15 days.
Atlas "White" .....$ 8.50 per bbl.
Forms, Labors average 22.00 per M.
Average cost of concrete in place, exclusive of forms, 28c per cu. ft.
4-inch concrete basement floor.....13c to 14c per sq. ft.
4½-inch concrete basement floor.....14c to 15c per sq. ft.
2-inch rat-proofing....6½c per sq. ft.
Concrete Steps.....$1.26 per lin. ft.

Damppproofing—
Two-coat work, 20c per yard.
Membrane waterproofing—4 layers of saturated felt, $5.50 per square.
Hot coating work, $2.00 per square.

Electric Wiring — $3.00 to $9.00 per outlet for conduit work (including switches).
Knob and tube average $2.25 to $5.00 per outlet, including switches.

Elevators—
Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2500; direct automatic, about $2400.

Excavation—
Sand, 50 cents; clay or shale, $1.00 per yard.
Teams, $10.00 per day.
Trucks, $21 to $27.50 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—
Ten-foot balcony, with stairs, $65.00 per balcony.

Glass (consult with manufacturers)—
Double strength window glass, 15c per square foot.
Quartz Lite, 50c per square foot.
Plate 80c per square foot.
Art, $1.00 up per square foot.
Wire (for skylights), 27c per square foot.
Obscure glass, 25c per square foot.
Note—Add extra for setting.

Heating—
Average, $1.70 per sq. ft. of radiation, according to conditions.

Iron—Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg.site)
Common, $23.00 per M (average).
Common O. P. select, average, $30.00 per M.

1 x 6 No. 3—Form lumber	$20.00 per M
1 x 4 No. 1 flooring	42.00 per M
1 x 4 No. 2 flooring	40.50 per M
1 x 4 No. 3 flooring	35.00 per M
1 x 6 No. 2 and better flooring	41.00 per M
1¼ x 4 and 6 No. 2 flooring	60.00 per M

Slash grain—

1 x 4 No. 2 flooring	$35.00 per M
1 x 4 No. 3 flooring	33.00 per M
No. 1 common run to T. & G.	30.00 per M
Lath	4.00 per M

Shingles (add cartage to prices quoted)—

Redwood, No. 1	$ .90 per bdle.
Redwood, No. 2	.75 per bdle.
Red Cedar	.90 per bdle.

Hardwood Flooring (delivered to building)—

13-16x3¼" T & G Maple	$135.00 M ft.		
1 1-16x2¼" T & G Maple	145.50 M ft.		
⅞x3½ sq. edge Maple	132.50 M ft.		
	13-16x2¼" T&G	⅜x2" T&G	5-16x2" Sq. Ed.
Clr. Qtd. Oak	$220.00 M	$160.00 M	$178 M
Sel. Qtd. Oak	150.00 M	122.00 M	121 M
Clr. Pla. Oak	155.00 M	110.00 M	113 M
Sel. Pla. Oak	132.00 M	79.00 M	97 M
Clear Maple	147.00 M	101.00 M	
Laying & Finishing	16c ft.	15c ft.	13c ft.

Wage—Floor layers, $9.00 per day.

Building Paper—

1 ply per 1000 ft. roll	$3.80
2 ply per 1000 ft. roll	5.60
3 ply per 1000 ft. roll	8.75
Sash cord com. No. 7	$ 1.00 per 100 ft.
Sash cord com. No. 8	1.10 per 100 ft.
Sash cord spot No. 7	1.60 per 100 ft.
Sash cord spot No. 8	1.90 per 100 ft.
Sash weights cast iron	52.00 ton

Nails, $3.25 base.
Belgian nails, $3.00 base.

Millwork—
O. P. $80.00 per 1000. R. W., $85.00 per 1000 (delivered).
Double hung box window frames, average, with trim, $6.00 and up, each.
Doors, including trim (single panel, 1¾ in. Ore. pine) $6.75 and up, each.
Doors, including trim (five panel, 1¾ in. Oregon pine) $6.00 each.
Screen doors, $3.50 each.
Patent screen windows, 20c a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., $5.50 each.
Dining room cases, $6.50 per lineal foot.
Labor—Rough carpentry, warehouse heavy framing (average), $11.00 per M.
For smaller work, average, $22 to $30 per 1000.

Marble—(Not set), add 50c to 65c per ft. for setting.

Alaska	$1.40 sq. ft.
Columbia	1.40 sq. ft.
Golden Vein Yule Colo.	1.70 sq. ft.
Pink Lepanto	1.50 sq. ft.
Italian	1.75 sq. ft.

Tennessee	1.70 sq. ft.
Verde Antique	3.00 sq. ft.

NOTE—Above quotations are for ⅞ inch wainscot in large slabs f.o.b. factory. Prices on all other classes of work should be obtained from the manufacturers.

Floor Tile—Set in place.

Verde Antique	$2.50 sq. ft.
Tennessee	1.50 sq. ft.
Alaska	1.35 sq. ft.
Columbia	1.45 sq. ft.
Yule Colorado	1.45 sq. ft.
Travertine	1.60 sq. ft.

Painting—

Two-coat work	30c per yard
Three-coat work	40c per yard
Whitewashing	4c per yard
Cold Water Painting	8c per yard

Turpentine, 83c per gal. in cans and 68c per gal. in drums.
Raw Linseed Oil—$1.25 gal. in bbls.
Boiled Linseed Oil—$1.28 gal. in bbls.

Carter or Dutch Boy White Lead in Oil (in steel kegs)

	Per. Lb.
1 ton lots, 100 lbs. net weight	12¼c
500 lb. and less than 1 ton lots	12½c
Less than 500 lb. lots	13c

Dutch Boy Dry Red Lead and Litharge (in steel kegs)

1 ton lots, 100 lb. kegs, net wt.	12¼c
500 lb. and less than 1 ton lots	12½c
Less than 500 lb. lots	13c

Red Lead in Oil (in steel kegs)

1 ton lots, 100 lb. kegs, net wt.	13¾c
500 lb. and less than 1 ton lots	14c
Less than 500 lb. lots	14¼c

Note—Accessibility and conditions cause wide variance of costs.

Patent Chimneys—

6-inch	$1.00 lineal foot
8-inch	1.50 lineal foot
10-inch	1.85 lineal foot
12-inch	2.10 lineal foot

Pipe Casings — 12" long (average), $7.50 each. Each additional inch 10c.

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.40
2 coats, lime mortar hard finish, wood lath	.52
2 coats, hard wall plaster, wood lath	.56
3 coats, metal lath and plaster	1.00
Keene cement on metal lath	1.25
Ceilings with ¾ hot roll channels metal lath	.67
Ceilings with ¾ hot roll channels metal lath plastered	1.40
Shingle partition ¾ channel lath 1 side	.62
Single partition ¾ channel lath 2 sides 2 inches thick	2.20
4-inch double partition ¾ channel lath 2 sides	1.30
4-inch double partition ¾ channel lath 2 sides plastered	2.45

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
2 coats Atlas cement, brick or concrete wall	1.25
3 coats cement finish No. 18 gauge wire mesh	1.75
3 coats Atlas finish No. 18 gauge wire mesh	2.05

Wood lath, $4.50 per 1000.
2.5-lb. metal lath (dipped) .19
2.5-lb. metal lath (galvanized) .22
3.4-lb. metal lath (dipped) .24
3.4-lb. metal lath (galvanized) .29
¾-inch hot roll channels, $45 per ton.
Hardwall plaster, $15.40 ton; $12.96 in paper sacks (rebate 15c sack).
Finish plaster, $16.40 ton; in paper sacks, $13.85 (rebate 10c sack).
Dealer's commission, $1.00 off above quotations.
Hydrate Lime, $19.50 ton.
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $43.00 per M.

Composition Stucco—$1.60 to 2.00 per sq. yard (applied).

Plumbing—

From $60.00 per fixture up, according to grade, quantity and runs.

Roofing—

"Standard" tar and gravel, $5.25 per square for 30 squares or over.
Less than 30 squares, $5.50 per sq.
Tile, $19.00 to $35.00 per square.
Redwood Shingles, $11.00 per square in place.
Cedar Shingles, $10.50 sq. in place.
Recoat, with Gravel, $3.00 per sq.

Sheet Metal—

Windows—Metal, $1.80 a sq. foot.
Fire doors (average), including hardware, $2.00 per sq. ft. (not

Skylights—

Copper, $1.35 sq. ft. (not glazed).
Galvanized iron, 28c sq. ft. (not glazed).

Stone—

Granite, average, $5.50 sq. foot in place.
Sandstone, average Blue, $3.50; Boise, $2.60 sq. ft. in place.
Indiana Limestone, $2.60 per sq. ft. in place.

Store Fronts—

Copper sash bars for store fronts, corner, center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Steel Structural—$84 per ton (erected). This quotation is an average for comparatively small quantities
Light truss work higher; plain beam and column work in large quantities, less.
Cost of steel for average building (erected), $78.00 per ton.

1930 WAGE SCHEDULE FOR SAN FRANCISCO BUILDING TRADES

FIXED BY S. F. BUILDERS EXCHANGE

Craft	Journeymen Mechanics
Asbestos workers	$ 8.00
Bricklayers	11.00
Bricklayers' hodcarriers	7.00
Cabinet workers, (shop)	7.50
Cabinet workers, (outside)	9.00
Carpenters	9.00
Cement finishers	9.00
Electric workers	9.00
Electrical fixture hangers	8.00
Elevator constructors	10.00
Elevator helpers	7.00
Engineers, portable and hoisting	9.00
Glass workers	8.50
Hardwood floormen	9.00
Housemovers	8.00
Housesmitbs, arch. iron, skilled all branches	9.00
Housesmiths, arch. iron, not skilled all branches	8.00
Housesmiths, reinforced concrete, or rodmen	9.00
Iron workers (bridge & structural) including engineers	11.00
Laborers, building (6-day week)	5.50
Lathers, channel iron	10.00
*Lathers, all other	8.50
Marble setters	10.00
Marble helpers	6.00
Marble cutters and copers	8.00
Marble bed rubbers	7.50
Marble polishers and finishers	7.00
Millmen, planing mill department	7.00
Millmen, sash and door	6.00
Millwrights	8.00
Model makers	10.00
Model casters	9.00
Mosaic and Terrazzo workers	9.00
Mosaic and Terrazzo helpers	6.00
Painters	9.00
Painters, varnishers and polishers (shop)	7.50
Painters, varnishers and polishers (outside)	9.00
Pile drivers and wharf builders	9.00
Pile drivers engineers	10.00
Plasterers	11.00
Plasterers' bodcarriers	7.50
Plumbers	10.00
Roofers, composition	8.00
Roofers, all others	8.00
Sheet metal workers	9.00
Sprinkler fitters	10.00
Steam fitters	10.00
Stair builders	9.00
Stone cutters, soft and granite	8.50
Stone setters, soft and granite	9.00
Stone carvers	8.50
Stone derrickmen	9.00
Tile setters	10.00
Tile helpers	6.00
Auto truck drivers, less than 2500 lbs.	5.50
Auto truck drivers, 2500 to 4500 lbs.	6.00
Auto truck drivers, 4500 to 6500 lbs.	6.50
Auto truck drivers, 6500 lbs. and over	7.00
General teamsters, 1 horse	5.50
General teamsters, 2 horses	6.00
General teamsters, 4 horses	6.50
Plow teamsters, 4 horses	6.50
Scraper teamsters, 2 horses	6.00
Scraper teamsters, 4 horses	6.00

*On wood lath if piece rates are paid they shall be not less than such an amount as will guarantee, on an average day's production of 1600 lath, the day wage set forth.

Eight hours shall constitute a day's work for all Crafts except as otherwise noted.

Plasterer's hodcarriers, bricklayers' hodcarriers, roofers, laborers, and engineers, portable and hoisting, shall start 15 minutes before other workmen, both at morning and noon.

Five days, consisting of eight hours on Monday to Friday inclusive, commencing January 31, 1930, shall constitute a week's work.

Overtime shall be paid as follows: For the first four hours after the first eight hours, time and one-half. All time thereafter shall be paid double time. Saturday (except laborers), Sundays from 12 midnight Friday, and Holidays from 12 midnight of the preceding day shall be paid double time. On Saturday laborers, building, shall be paid straight time.

Where two shifts are worked in any twenty-four hours shift time shall be straight time. Where three shifts are worked, eight hours pay shall be paid for seven hours on the second and third shifts.

All work shall regularly be performed between the hours of 8 A. M. and 5 P. M., provided, that in emergencies or where premises cannot be vacated for work by mechanics until the close of business, men then reporting for work shall work at straight time; but any work performed after midnight shall be paid time and one-half except on Saturdays, Sundays, and holidays, when double time shall be paid.

Recognized holidays to be New Year's Day, Decoration Day, Fourth of July, Labor Day, Admission Day, Thanksgiving Day and Christmas Day.

Men ordered to report for work, for whom no employment is provided, shall be entitled to two hours pay.

is not the biggest factor in economy. This factor is less tangible than lumber, nails, brick and cement. It is the elimination of waste and delay that did nobody any good.

There is plenty of money available to finance building. There is prompt delivery of materials, a more important consideration than a variation in prices. There is skilled labor ready when needed. And contractors are figuring their jobs closer, for they are hungry for the business.

This is in sharp contrast to tight money, material deliveries when you get them, work dragging while waiting for skilled workmen to be released from rush jobs and contractors so busy that they are not particularly eager for more work. All this meant delay to eat up the interest on investment without producing any return. That is the lost motion which runs up building costs in peak periods.

MASS HOME PRODUCTION

Edison, some years ago, proposed the building of concrete houses by setting up the forms and simply pouring the whole superstructure at one operation. When he tried it he found it wasn't practical. He hasn't wasted any time on it since.

But a lot of folk, who would like to do something Edison couldn't do, have been offering suggestions much along that line ever since. The ready-cut woodhouse has been developed. Concrete slabs have been tried, used in fact, but not with marked success.

Now the discussion is of a house that can be built in sections, by hooking a room on here or there as occasion demands. All fine in theory.

Recently Leonard P. Reaume, president of the National Association of Real Estate Boards, talking before the Kansas City Real Estate Board, predicted an early development of mass production of homes.

"In the last ten or fifteen years," he said, "the motor car has doubled its efficiency and cut its price in two by mass production. Builders, working on the old unit plan, have doubled their costs."

"Bathrooms," he said, "could be fabricated at standard units. They could be delivered to the house and hoisted into place with a crane, all complete."

And by the same token, one assumes, if you become tired of the dining room it could be detached and changed. Or the bathroom could be lifted out and another set in to harmonize with the prevailing color vogue. Possibly in time one could have a new model home every year along with the new car.

All this reads interestingly until you chance to speculate about the probable cost of carting rooms about town. Or transporting detachable walls from one city to another. The side of a house is vastly different from the tonneau of a motor car.

Realtors may find such stuff an easy means to keep them before their public. But it doesn't inspire confidence half so much as it suggests the silly season.—*Bulletin,* Illinois Society of Architects.

BRADFIELD
joins
SOULÉ

SOULÉ service to builders . . . recently enlarged by the inclusion of United States Metal Products Co. . . has been further amplified by another notable expansion.

The L. G. Bradfield Company, manufacturers of the nationally favored Bradfield Doors, will hereafter operate, under the direction of Mr. Bradfield, as a unit of Soulé Steel Company. There will be no change in personnel.

SOULÉ
STEEL COMPANY

LOS ANGELES SAN FRANCISCO PORTLAND

Specify
DICKEY
CLAY
PRODUCTS

The name "DICKEY" is everywhere recognized as a guide to Clay Products of uniformly high quality.

DICKEY MASTERTILE
THE STANDARD HOLLOW BUILDING TILE

Partition Tile	Face Brick
Drain Tile	Fire Brick
Veneering Tile	Paving Brick
Furring Tile	Step & Walk Brick
Fireproofing Tile	Wall Coping
Floor Tile	Flue Lining

DICKEY Flashing Blocks

W. S. DICKEY CLAY MFG. COMPANY
SAN FRANCISCO

Can you afford to pick an ARCHITECT on pictures?

¶ Pictures are not Architecture. Pictures, like words, are only a medium of expression. And like words, they may also convey untruths, only with more subtle harm. Thus, the layman should never select his Architect solely on his judgment of drawings submitted.

¶ It is because Architecture is a science of thought and action—rather than the mere penciling of lines on paper — that Architects of standing either hesitate or refuse to submit drawings for proposed work in open and unregulated competitions where the drawings are not restricted by definite program and judged by those who are technically skilled.

¶ In selecting your architectural advisor, go about it in the same logical way in which you would choose your legal or medical advisor — namely, on the basis of knowledge of his natural ability, training, practical experience and professional standing.

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Who's Who in this Issue

ALLISON & ALLISON, architects of the Dome and other buildings in Westwood Village, illustrated in this issue, have been practicing in Los Angeles since 1910. This firm is well known throughout the state as architects of more than 150 school buildings. Soon after they established themselves in Los Angeles, they became identified with school building design in Santa Monica and other Southern California school districts. Later they designed the high school groups at Palo Alto and Santa Maria, also the Memorial Theater at Santa Monica and club buildings in Los Angeles for the University Club, Friday Morning, Shakespeare and Woman's Athletic Clubs. **David C. Allison** received his education at the University of Pennsylvania. He is a Fellow of the American Institute of Architects and a member of several Los Angeles Clubs. **James E. Allison** was born in Hookstown, Pennsylvania. He attended the Oakdale Pennsylvania Academy and began the practice of architecture at Pittsburgh in 1893. He is a Fellow of the American Institute of Architects, a member of the University Club, Los Angeles, and the Pasadena Golf Club.

HENRY H. GUTTERSON, winner of the Salem Lutheran Home Competition. A biographical sketch of Mr. Gutterson appeared in **The Architect and Engineer** for July, 1930.

E. GEOFFREY BANGS, whose design for the Salem Lutheran Home is illustrated in this issue, was given second prize by the Jury of Award. Mr. Bangs is a graduate of the University of California. He received his architectural training in the office of John Galen Howard. He is at present practicing his profession in Oakland, California.

JOHN STEPHEN McGROARTY, who writes of Westwood Village, is a newspaper man of renown. His articles have appeared in leading magazines and newspapers throughout the United States.

F. W. FITZPATRICK, whose article on The Utilization of Lanes or Alleys for the Relief of Traffic Congestion in the Large Cities, appears elsewhere in this issue, is a consulting architect of national reputation and is probably best known to the building industry as the author or instigator of Fire Prevention.

ARNE ARNTZEN is a building manager who has some good ideas on the cooperation of the members of his profession with the architect and owner.

EMERSON KNIGHT, who writes an interesting account of his recent visit to Mexico, is a landscape architect with offices in San Francisco. He was born in Cincinnati in 1882, the son of Wm. H. Knight, astronomer and author. Mr. Knight moved to California in 1891. He served Cammillo Franceschi Fenzi, by supervising landscape development work in Santa Barbara in 1916 and was associated with Mark Daniels, landscape engineer, by assuming charge of 80 acres on the Estate of J. Cheever Cowdin in Hillsborough in 1917. Mr. Knight established his own office for the practice of the profession of landscape architecture in San Francisco in September, 1919. He was engaged in the design and development of gardens and estates in Central California in 1918 to 1929, inclusive. He served Frederick Law Olmstead, Jr., in behalf of the Statewide Park Survey, for the California State Park Commission in 1928. Mr. Knight designed the outdoor Theater for the Estate of Max M. Cohn, Los Gatos, California, and conceived and designed the outdoor theater for Easter sunrise services on the summit of Mt. Helix, near San Diego, in association with Messrs. Regua & Jackson, architects of San Diego; also the outdoor theater for drama and symphony at Hillsborough in association with Messrs. Willis Polk and Co., architects.

JOHN AND DONALD B. PARKINSON—See **Architect and Engineer,** December, 1929.

S. F. LIGHT, who is a professor of zoology at the University of California, Berkeley, and whose article on the Termite was published in the July issue, did his graduate work at Princeton University, from which he received the M. S. degree, and the University of California, from which he received the Ph. D. degree in 1926. Doctor Light spent many years in the Orient, where he was Professor of Zoology at the University of the Philippines and the University of Amoy, China. He is a student of the classification, biology, and perforce of the economic problems presented by termites in the Orient and the American continent. At present he is devoting himself, in the interstices of teaching, to the study of Pacific Coast termites in conjunction with the program of the Termite Investigations Committee. Doctor Light is a member of the American Association for the Advancement of Science, the American Society of Economic Entomologists, the Entomological Society of Zoology, the American Society of Parasitologists, and the Society for Experimeutal Biology and Medicine.

HERMAN BROOKMAN, architect of the buildings for M. Lloyd Frank at Portland, Ore., has been practicing his profession in Portland for the past three years. His early training was with eastern architects Mr. Brookman has been trusted with several important commissions since coming the Pacific Coast, including the estate of Mr. Frank, the Jewish synagogue and the Meier-Frank Building, all in Portland, Ore.

RALPH J. BISHOP whose interesting sketches are published in this issue, is in the office of Sutton, Whitney and Dugan, architects of Tacoma, Washington. Bishop has shown considerable talent in rapid-fire sketches of which he has made several hundred. These have been exhibited in various cities in the Northwest and have been au inspiration to other draftsmen. Many of Mr. Bishop's most successful sketches depict scenes in the tide-flats, Tacoma, Washington.

Shell Building, San Francisco

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Contents

COVER DESIGN—A Spanish Shop for Berkeley, California
Fred L. Confer

FRONTISPIECE—Desmond's and Holmby Hall, Westwood Village, California
John and Donald Parkinson, Gordon B. Kaufmann, Architects

TEXT

Westwood Village—A Year and a Day to Build 29
John Steven McGroarty
Closer Co-operation Needed 43
Arne Arntzen
Competition for the Salem Lutheran Home 47
The Super Service Station of Today 57
T. L. Lingham
Utilization of Lanes for Traffic 61
F. W. Fitzpatrick, Consulting Architect
New Highways in Old Mexico 73
Emerson Knight, Landscape Architect
The Organ in the Home 83
J. B. Jamison
Age of Better City Planning is Here, Says Cheney 90
The Architect's Viewpoint 96
Editorial Chat 98
With the Architects 99
Society and Club Meetings 105

PLATES AND ILLUSTRATIONS

WESTWOOD VILLAGE, CALIFORNIA
"The Dome," *Allison & Allison, Architects* 30
Interior, "The Dome" 31
Gasoline Station, *Stanton, Reed & Hibbard, Architects* 32
Holmby Hall, *Gordon B. Kaufmann, Architect* 34
Security Bank, *Morgan, Walls & Clements, Architects* 36-37
Desmond's, *John and Donald Parkinson, Architects* 37-38
Building for J. T. Kelly, *Paul Williams, Architect* 39
Building for Potter Hardware Co., *P. P. Lewis, Architect* 40
Doheny-Holmby Dormitory, *Stanton, Reed & Hibbard, Architects* 40
Winning Design, Salem Lutheran Home, Oakland 46-48
Henry H. Gutterson, Architect
Design Placed Second, Salem Lutheran Home, Oakland 48-49
E. Geoffrey Bangs, Architect
Design Placed Third, Salem Lutheran Home, Oakland 50-51
Rollin S. Tuttle, Architect
Outbuildings on the Estate of M. Lloyd Frank, Portland, Oregon ..... 52 to 56
Herman Brookman, Architect
Shell Oil Super Service Station 57-58
T. L. Lingham, Designer
Portfolio of Camera Sketches—Spanish Patios ..... 63 to 71
Lothar C. Maurer
Views of New Highways in Old Mexico ..... 74 to 81
Sketches by Ralph J. Bishop ..... 87 to 93

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DESMOND'S AND HOLMBY HALL, WESTWOOD VILLAGE

JOHN AND DONALD PARKINSON; GORDON B. KAUFMANN, ARCHITECTS

The ARCHITECT AND ENGINEER

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WESTWOOD VILLAGE
A YEAR AND A DAY TO BUILD

By John Steven McGroarty

ONE day in the Springtime of the year I wandered over the old historic Rancho of San Jose de Buenos Aires in California of the South. From its rolling hills there were glimpses of the vast expanse of the Pacific, Mother of the Seas, stretching under turquoise skies to mystical Cathay.

Green were the gently undulating hills, bright in places with wild flowers. The sun was warm and comforting on my back, and my lungs were elate with the tang of the ocean's clean, life-giving breath borne from the buttresses of the Santa Monica Palisades and the crescented swing of the purpled Malibu.

Beyond, to the northward, towered the star-reaching, snow-crowned peeks of the Sierra Madres. From eastward the tenuous hum of the roar of traffic of the great Wonder City—Los Angeles. I could see, dim and softened to the eye, the roofs of its temples and its busy marts of trade. The white, shining monolith of its Babylonian Tower shone against the bending skies through the veils of the morning haze. World-famed Hollywood, mecca of dreamers, lay but a short league, or less, away.

El Rancho San Jose de Buenos Aires—St. Joseph and good air—California's patron Saint for companion; and the breath of the desert blended with the breath of the sea to sing in one's happy lungs and dance in a contented heart. And the unutterable beauty of the world flung in ever-changing, indescribable pictures around and all about me. The thrown tapestries of the earth for my feet; the hung canvasses of the skies upon which God had painted, here and there, wandering cloud isles of gold and amethyst.

Upon that wondrous Springtime day there was yet no sign of the trespass of the invading city. Now and then there was a relic in some form of ruin that spoke memories of old days that are gone—days when dons and the patriarchs ruled the glad land with the gentle courtesy of kindly power.

And there, in the midst of the hills, filling a wide field of the green campagna that sloped toward the sea, I came upon an amazing stretch of new tomato vines. Gardeners were at work bent to pleasant toil in the joyous morning. The long rested soil of the Rancho was at work again, after lazy years of rest. Soon there would be red vine

Photo by Mott Studios

"THE DOME," WESTWOOD VILLAGE, CALIFORNIA

ALLISON & ALLISON, ARCHITECTS

Photo by Mott Studios

INTERIOR, "THE DOME," WESTWOOD VILLAGE, CALIFORNIA

ALLISON & ALLISON, ARCHITECTS

Photo by Mott Studios

GASOLINE STATION, WESTWOOD VILLAGE, CALIFORNIA

STANTON, REED & HIBBARD, ARCHITECTS

apples for soups and salads in the roaring town, with the old matchless flavor of San Jose de Buenos Aires in them.

All those things, and more, I saw one day in Springtime when I was a happy wanderer.

* * *

Sped then upon Time's swift wings a year — one little, fleeting year that was come and gone so soon that it seemed scarcely to have been at all.

And then I went back again to the Rancho San Jose de Buenos Aires. I went back to behold a change of which I had been told—a change that men said was like a miracle and that I would not think to believe unless I were to see it with my own eyes.

And I did see it with my own eyes. It was a miracle, surely. Where my beloved vineyard of the tomatoes had been there arose before my eyes a lovely city of domes and tiled roofs, luring porticos and cloistered arcades that stood like a Phoenician dream on either side of wide, sunlit streets.

And it was within the little sweep of just a year and a day that this almost unbelievable transformation had come to pass.

It is of Westwood Village that I am speaking, newest of the new cities of California of the South, and in every way the most remarkable of them all. It is the new city that closes the last open gap that stood between Los Angeles and the sea.

I have written many pages in the forms of newspaper and magazine articles, books and plays about the old romance of California, but I have also been the witness of a new romance—the romance of the great trek of the American westward.

In our time we are living witnesses of history repeating itself. Which is to say that in our day there are at least two migrations in progress that are no more than repetitions of the almost innumerable migrations that have taken place in the ages and centuries of the past—migrations that have always been toward the West. There is now in progress the migration of the Chinese into Manchuria and this migration of the American to the ultimate shores of the Pacific.

When I returned to see again the rolling hills in the clasp of which was my vast and well-beloved tomato field, there was no time for pangs of regret. The amazement that swept me and the wonder of what I saw, and the sheer beauty that is Westwood Village, gave no room for any other thought.

Because, after all, there is nothing that makes quite the same deep appeal to human emotions as the clustered habitations of happy peoples in the possession of beauty and contentment. It seems that God, when He made lovely hills and luring vales, had it also in His great plan to give man the opportunity to add still to the picture.

Sometimes man has blundered pathetically, and even stupidly, in his efforts. Too often, alas, man makes almost hideous, by his crude blundering, hills and vales that were entrancingly lovely before his hand was laid upon them.

But Westwood Village is the one place in the world that I would say the opportun-

THE MIRACLE CITY

WESTWOOD Village contains sixty-eight mercantile establishments and numbered among them are branches of some of Los Angeles' largest firms.

The shopping center was planned by Harlan Bartholomew, famed City Planner of St. Louis. Traffic experts were called into the picture and plans were laid which cover a continuous growth over a number of years.

Building, architectural and art restrictions were stipulated and the insistence placed upon the architectural requirements resulted in the employment of such firms as Allison and Allison, John and Donald Parkinson, Morgan, Walls and Clements, Gordon B. Kaufmann, James N. Conway, Stanton, Reid and Hibbard, Russell E. Collins and Paul Williams. An art committee passes on all designs and no sign is permitted to be erected which does not conform to the general plan for beauty. Streets are wide and are paved with eight to ten inches of concrete.

The sidewalks suggest an Old World tile effect and the bases of the electroliers are decorated with colored Spanish tiles. Alleys are provided at the rear of all lots.

ity laid open to man has been taken advantage of in the right way to the fullest and most satisfying extent.

Someone has said that "An institution is but the lengthened shadow of a man." And Westwood Village—to twist the saying a little—is the lengthened shadow of an institution.

Westwood Village, standing now where once basked in the sun the waste lands of Rancho San Jose de Buenos Aires, is the foresight of the Janss Investment Corporation of Los Angeles. With splendid vision and a full sense of responsibility, the Janss people, when they secured possession of the Rancho San Jose de Buenos Aires, determined to create an ideal community that should be ideal not only in its physical aspects but in the temper and character of its inhabitants. It is extremely fortunate that this last of the open areas between Los Angeles and the sea fell into the right hands.

It was first proposed to build what would become a second Hollywood in the respect that it would become a center of motion picture producing and manufacturing activities. And it is true that various of the great motion picture corporations were eager to transfer their business to this new scene. However, it was only the Fox Film Corporation that took definite steps. The great plant of this concern, standing on the edges of Westwood Village, is now visited by countless thousands of people. It is estimated that the Fox Corporation's investment there is of a value of not less than ten million dollars. The sudden and phenomenal increase in land values on the old Rancho, immedately upon its subdivision, was so great that it bounded beyond the reach of the other film companies for the purposes of studios.

HOLMBY HALL, WESTWOOD VILLAGE, CALIFORNIA
Gordon B. Kaufmann, Architect

The founders of Westwood Village did not permit, and still does not permit, the erection of any building of any kind whatsoever that does not fit into the picture. The new city is almost wholly constituted of the best type of Mediterranean architecture. It might well be a city of Phoenicia or of Spain, so alluring is its loveliness.

Indeed, upon my second visit I was shown a drawing of a proposed improvement of a very beautiful section of the old Rancho. A drawing of the way that this part of the Rancho would be when improved. Not knowing what the drawing portrayed, I was asked what I thought it might be. And I said, "Well, this spot is very familiar to me. It is a place on the island of Mallorca, in the heart of the Mediterranean, which I saw when I had a loan from God and had gone wandering in ships and caravans."

This little incident illustrates better than any words of mine could possibly convey the deft touch and the scrupulous care with which the Janss people are making Westwood Village an outstanding wonder in a world of wonders.

And the great thing about it all to my mind is that while one will behold in Westwood Village stately homes and great marts of commerce that have called forth the investment of vast sums of money, there is still openings left for homes of the humbler sort. In other words, though the man of boundless wealth can satisfy the expression of his desires by the expenditure of money in Westwood Village, there is still place and opportunity for the man of less plethoric bank account.

Only one thing is always and forever insisted upon, namely, that whatever is done, be it ever so pretentious or ever so humble, the one condition insisted upon is beauty. No man can invade Westwood Village and defy beauty.

MAIN BOULEVARD, WESTWOOD VILLAGE, CALIFORNIA

With beauty as its very religion, how logical it then seems that Westwood Hills has already become, and is destined to become still more so, the educational center of California of the South. In the finest setting in the world Learning has already lighted there her torch—a torch that will burn throughout the years to come as a beacon light for the footsteps of the generations seeking the shrine of knowledge and beauty.

The first great buildings of the "University of California at Los Angeles" already

Photo by Mott Studios

SECURITY FIRST NATIONAL BANK, WESTWOOD VILLAGE, CALIFORNIA

MORGAN, WALLS & CLEMENTS, ARCHITECTS

SECURITY FIRST NATIONAL BANK, WESTWOOD VILLAGE, CALIFORNIA
Morgan, Walls & Clements, Architects

BUILDING FOR DESMOND'S, WESTWOOD VILLAGE, CALIFORNIA
John and Donald Parkinson, Architects

ENTRANCE, BUILDING FOR DESMOND'S, WESTWOOD VILLAGE
JOHN AND DONALD PARKINSON, ARCHITECTS

BUILDING FOR JOHN T. KELLY, JR., WESTWOOD VILLAGE

PAUL WILLIAMS, ARCHITECT

BUILDING FOR POTTER HARDWARE COMPANY, WESTWOOD VILLAGE
P. P. Lewis, Architect

THE DOHENY-HOLMBY DORMITORY FOR GIRLS, WESTWOOD VILLAGE
Stanton, Reed & Hibbard, Architects

tower over Westwood Village. When fully completed this great University alone will represent an investment of ninety millions of dollars. The entire project will include not less than twenty buildings.

Besides the University there will be numerous other schools, among which may be mentioned Marymount School for Girls, St. John's Military Academy, Holmby College and Westlake School for Girls, Harvard Military Academy and Mount St. Mary's Girls' College. There is also planned at Westwood Village a Paulist Fathers Parochial School, and nearby are three public Grammar Schools, a public High School and a public Junior High School.

With the memory of old college towns through which I have wandered throughout America—old college towns with quaint little homes and unimaginative sorority and fraternity houses and the plain old halls of education, I was fairly swept off my feet by the glorious provision that has been made for students' homes in Westwood Village.

The sorority and fraternity houses there are like gorgeous private residences, the sorority houses all strung down a sunlit avenue, and the fraternity houses beyond on a street that winds through nooks of the hills. Unless so informed, the passer-by would never dream that these handsome mansions shelter and house the eager youth of California's Southern Branch of its great State University.

Trees grow like magic on the rich, long-rested soil of the old Rancho San Jose de Buenos Aires. And thousands of trees have been planted there to add the last exquisite touch of beauty to a scene that never lacked beauty. The flame of flowers and the luring green of hedges everywhere greets the eye.

The glory of the land of glory is this Westwood Village, the great mountains shining above it and the shimmer of the sunlit sea below. It is a place of dreams come true, of vision realized—a miracle in an age from which it was thoughtlessly said miracles had passed.

PATIO OF SHOP BUILDING, WESTWOOD VILLAGE
James N. Conway, Architect

PRESERVE NEGATIVES OF AMERICAN ARCHITECTURE

PICTORIAL archives, preserving a national record of early American Architecture, are being developed in the Library of Congress. About 5,000 negatives have already been received or pledged, according to a statement made public by the American Institute of Architects, which is seeking the co-operation of its Chapters and the public throughout the country in building up the collection.

"For many years the Library of Congress at Washington has served as the national repository for historic papers, presidential manuscripts and similar material, and is in consequence becoming the outstanding research center for students of early American history," said the statement, prepared for the Institute by Leicester B. Holland, chief of the Division of Fine Arts of the Library of Congress.

"No effort, however, has been made to record on a national scale the material aspects of our past. Costumes, furniture, utensils, and so forth can well be exhibited in private and local museums, and the preservation of historical monuments may be left to the care of community pride.

"But for the purposes of general study of our ancestral architecture, especially for such examples as are doomed to disappear, there is urgent need for a repository where photographic records from the whole United States may be assembled.

"For widest service these records should consist not only of prints to be studied on the spot, but of negatives from which prints may be supplied to those desiring them throughout the country.

"The archives should consist, therefore, of three parts: a collection of negatives, as all-embracing as possible; complete folio files of prints from these negatives, for consultation; and very full indices, topographic, chronologic and by subject, so that desired matter may be readily located.

"The Library of Congress is apparently the only national institution which can logically undertake this work; we are therefore establishing a subdivision of the Division of Fine Arts to serve as national Pictorial Archives of Early American Architecture.

"Gifts of some five thousand professional or semi-professional negatives have already been received or promised. By a grant from the Carnegie Corporation these are now being catalogued, and an extensive catalogue is also being prepared of illustrative material which has appeared in books and magazines.

"We now turn to the public who may use these archives, to solicit other negatives.

"Negatives of all sizes will be welcome; small negatives, if clear, make good enlargements, and many buildings now destroyed or hidden away are recorded only in amateur snapshots.

"All negatives given to us will be carefully indexed, with the name of the photographer and donor permanently recorded, and prints may be had from them as readily as if they were in the original owner's files.

"Or negatives may be bequeathed and deposited with us with the stipulation that, though indexed and available for study in our folios of prints, they shall still remain under the owner's control during his lifetime, and no prints be furnished to others without his consent.

"Our immediate request is not only for negatives of early American architecture to be preserved in perpetuity as national records, but that friends who have collections of negatives be informed of the Library's undertakings, or that the Library be informed of such collections.

"Eventually we hope for funds with which to purchase professional collections and undertake pictorial surveys of districts not yet properly photographed. But such funds will necessarily be contingent upon the general preliminary response to this undertaking."

CLOSER CO-OPERATION NEEDED

BY ARNE ARNTZEN

A SIGNIFICANT movement that has of late years made itself manifest, is the growing spirit of cooperation between the architects and the managers of commercial buildings. No doubt this is a natural sequence of the development of the type of buildings popularly referred to as skyscrapers, the tremendous investment in which requires the production of the greatest possible amount of rentable space so economically constructed, equipped and arranged as to attract tenants at rental rates that will yield an adequate profit to the owner; which is, of course, the prime object to be attained by the erection of such a building.

To effect this, the advice and counsel of men skilled in the renting, operating and maintaining of commercial buildings is becoming more and more necessary. Furthermore, the rendering of such advice is becoming more and more frequent and for this the organizing and subsequent improving of the Building Plan Service of the National Association of Building Owners and Managers has no doubt been in a large measure responsible. At any rate, this service has provided a common meeting-ground where the owner, the architect and the building manager have been able to view the proposed building project, as it were, through the eyes of one another.

Far reaching as these results have been, however, there still is need of a closer appreciation of the other's peculiar problems.

To the architect, the building manager, all too often, is a source of constant worry, if not real concern. Continually he demands more and more square feet of Class "A" rentable floor area. These insistent demands, which undeniably are of the utmost importance, have disturbed the architect to such an extent that his impression of the majority of building managers is that they see the results of his creative endeavors only in the terms of dollars and cents per square foot of rentable floor area; failing to grasp what to him is just as essential as the air he breathes, the necessity of a harmonious design, not only as far as the exterior shell of his project is concerned, but likewise wherever p o s s i b l e in the proper planning and design of tenant space.

The building manager, on the other hand, sees in the average architect a visionary type of individual whose artistic nature has been overdeveloped. Primarily he is a dreamer. How then, can he hope to cope with the practical issues that are so necessary to the successful completion of an office building? Important problems like the proper spacing of columns, the maximum depth of offices, the location of utilities, are apparently given only passing attention, whereas, to the building manager the proper solution of these very problems in all likelihood, would represent the difference between the ultimate success or failure of the venture.

Possibly these illustrations have been overdrawn. If one could presume upon the impossible and find an architect who, besides possessing the requisite professional training, had a distinct leaning toward the commercial side of his problem, it would be a very satisfactory solution. But the

Editor's Note—The author is associated with Holabird & Root, architects, Chicago, Ill. Mr. Arntzen's article appeared in *Buildings and Building Management* for May, 1930.

combination of a professional-commercial type of mind is a rare occurrence. Or, vice versa, if the building manager could to a degree grasp the significance of Ruskin's contention that "each building is a living thing, that each stone has a tongue and every tongue could tell a story," and was not to be measured only as a means to an end, namely, the erection of a building—then we will have made notable progress with our problems.

It is apparent, therefore, that successful office building, as far as good design, efficiency of operation and maximum income on the investment are concerned, can only be arrived at by the closest kind of co-operation between the architect and building manager.

At the very inception of an office building program, expert consultants in various specialized fields of endeavor should be interviewed. Expert opinion as to the probable rentals that might be anticipated at the particular site the building is to be erected upon should be determined.

An exhaustive study of the building site should be made to determine the trend of commercial buildings. Instead of being toward the site in question it may be moving in the opposite direction, and the site may be more favorably adapted to some other type of building. Expert advice of this nature would save the owner considerable money.

Then, too, there is the question of the percentage of office vacancies in the city in which the building is to be erected. Obviously, if the city is not enjoying a normal growth, as far as population is concerned, and the market condition is such that the available space could not be readily absorbed, it would be unwise to proceed with the erection of another building. It would only serve to throw an added amount of space upon the market with little likelihood of its being leased for some time to come. Statistics as to these conditions and opinions of local building managers or their local association, if one exists, should be obtained and seriously considered.

It is important to note that all difficulties that might arise from neglect of any such factors can in large measure be surmounted, or at any rate, very materially reduced by this thought and consideration prior to the erection of a building. Careful deliberation and expert advice of authorities in their respective fields can render invaluable service to the owner of the building.

On the other hand, to call for such advice after construction has already commenced is poor economy. Likewise it usually leads to an unpleasant state of affairs. For one thing it places the architect in a bad situation, as usually comments and suggestions will be made by the members of this organization, that in all likelihood cannot at this stage of the game be carried out successfully by the architect unless he revises his plans and makes important changes in the construction work gone forward. Good economy, therefore, necessitates that this advisory service should start at the very inception of a building program.

As soon as the possibility of leasing space in the building develops, another condition presents itself. The architect may realize that the interior subdivision of the space in the building is just as important a factor to consider as the design of the exterior, but it is a peculiar fact that this phase of architectural service is often regarded as considerably beneath the solution of a problem of pure design or intricate plan.

But is it? In the last analysis, it is apparent that only through the highest possible development of the tenant subdivision, so that the tenant receives the utmost in efficiency of this space and the owner of the building the most economical layout, as far as price is concerned, that the project is going to be a success.

In other words, a condition like this could readily exist: Through careless study of the peculiar requirements of the tenant and, let us say, disregard as to costs involved in building construction as far as tenant subdivisions are concerned, it is entirely possible to conceive of a building being rented to capacity, yet failing to produce

an adequate return on the investment; therefore one cannot emphasize too strongly that the financial returns on an office building are in direct proportion to the greatest efficiency in its space layouts commensurate with the greatest economy in construction costs.

There seems to be a tendency in the direction of utilizing the particular services that the architect has to offer in a wider sphere of activity than he has heretofore been employed. This is in the field of preparing layouts for prospective tenants. Especially is this true where larger subdivisions are contemplated.

Inasmuch as the entire procedure of tenant subdivisions is becoming a more complex and exacting problem every day, it would, it seems, be good policy for the architectural profession to give that phase of activity more attention. That it has elicited some thought and consideration by the profession can be seen inasmuch as one of the leading architectural firms in the country has a department within its organization devoted entirely to the preparation of tenant subdivisions, from the presentation of preliminary studies through to the making of working drawings, and also to giving expert advice in such problems as interior decorating.

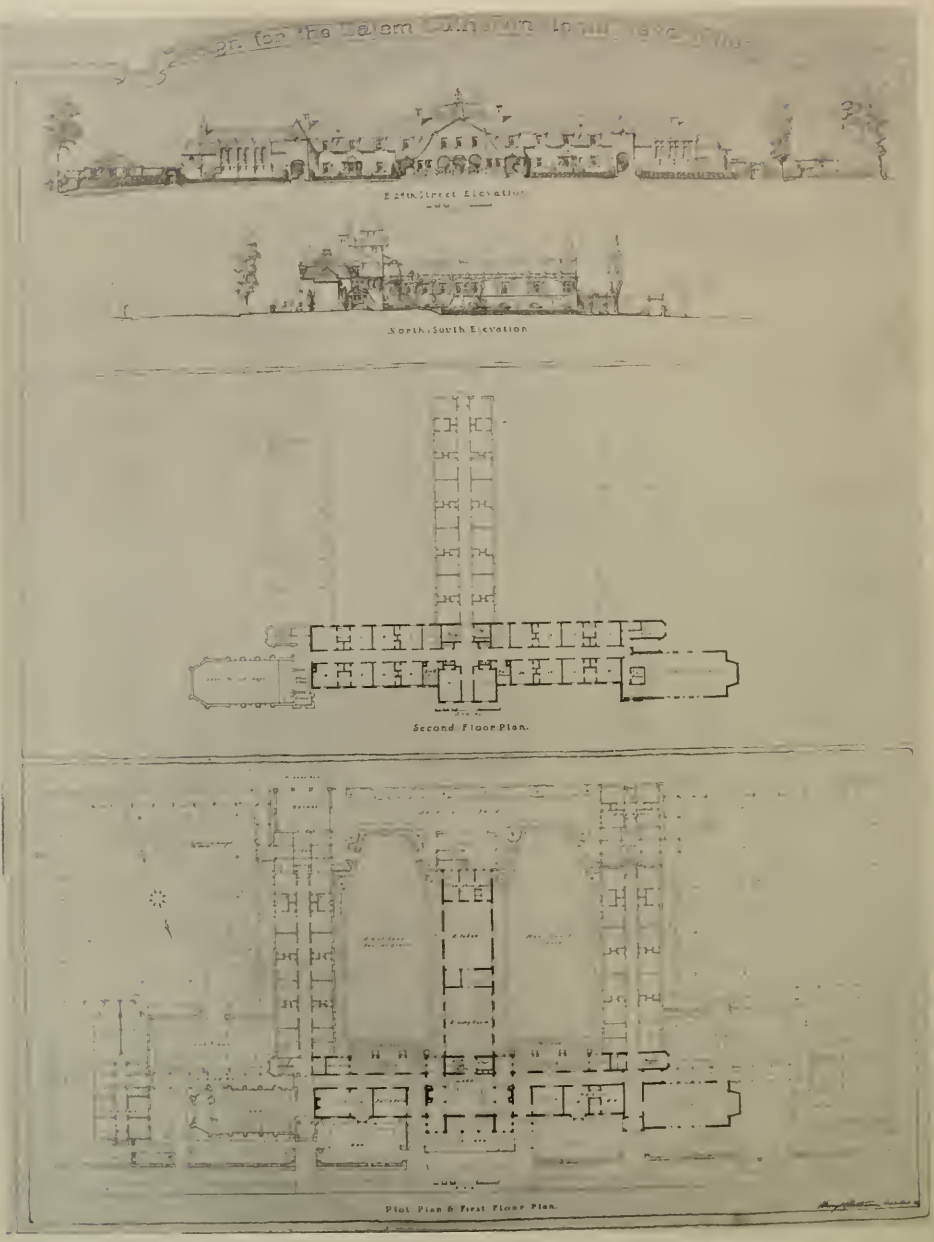
A department of this sort, organized by the architect, might function under a capable draftsman, especially trained in the laying out of rentable areas and assigned to the duty of developing the rental plans in co-operation with the building manager.

The manager will, of course, get in touch with the architect's assistant having charge of this layout department as soon as a prospective tenant becomes interested in space offered. The assistant is informed of the dimensions and location of the office under consideration and, whenever possible, of the space the tenant is occupying. The assistant then calls upon the tenant and arranges to make a scale drawing of his present space, outlining carefully the total area occupied, the dimensions of the various offices and the relations these bear to each other. He will also by inquiry determine if there are any unsatisfactory conditions, as to area or location, in the present arrangement; he will also note the dimensions and preferred placing of the various pieces of furniture and office appliances. The information thus obtained may then be studied in relation to the new space offered and preliminary sketches promptly prepared—the time element being a very important factor at this stage of renting. The advice and suggestions of the building manager will be most helpful, as he has an intimate knowledge of the requirements of different classes of tenants and his experience puts him in position to know the type of offices that are likely to appeal to any particular one. The sales value of sketches so prepared is well understood by building managers.

Another matter closely related to the planning of tenants' subdivisions is that of the interior decoration of the offices. This is a service required by many tenants and time and trouble are saved if the question of decoration can be attacked as soon as the lease is consummated.

It appears evident that much would be gained by thus centralizing responsibility. Instead of following the customary procedure of retaining the architect only until the building is turned over to the owner, it might prove better practice to continue his service in connection with tenants' layouts and interior decoration (and also floodlighting if that feature is to be installed) at least until the building is rented to capacity. This has a distinct advantage of eliminating a great deal of worry and trouble that the building manager would incur, giving him, on the other hand, more time to concentrate on an attack of his own most important first problems, selling space and perfecting his operating plans and policies.

Worth-while values are largely obtained by taking cognizance of the ideas the other fellow is developing and utilizing them wherever possible to advantage. The building manager and the architect are favorably situated to be of material aid to each other.



WINNING DESIGN, SALEM LUTHERAN HOME COMPETITION, OAKLAND
HENRY H. GUTTERSON, ARCHITECT

COMPETITION FOR THE SALEM LUTHERAN HOME

A COMPETITION, participated in by three architectural firms, Henry H. Gutterson of San Francisco, E. Geoffrey Bangs of Oakland, and Rollin S. Tuttle of Los Gatos, was recently sponsored by the trustees of the Salem Lutheran Home Association of the Bay Cities. The competitors were invited to submit plans for a new unit of a scheme of permanent buildings on the property owned by the Association at 2361 Twenty-ninth Street, Oakland. William Wilson Wurster, architect of San Francisco, acted as Professional Adviser, while the Jury of Award was composed of A. L. Thulin, Chairman of the Building Committee, Ernest E. Weihe and Raymond W. Jeans, architects. The design of Henry H. Gutterson was chosen by the Jury as the one best fulfilling the requirements of the program.

The competitors were asked to "prepare plans for the first unit of a scheme of permanent buildings—the ultimate project to provide for 60 to 80 guests—and arranged in a manner to admit a maximum amount of sunshine." To quote further from the Program: "The ultimate scheme should contain a chapel. The buildings are to be Class 'C' construction with exterior treatment in brick, concrete or plaster finish. While the first unit only will be definitely planned at this time, it is deemed advisable, in fact almost necessary, that an outline, as well as a perspective group of buildings be submitted, in order to visualize what part in the finished scheme the first unit will play. Nothing elaborate is required, but the whole should produce a homelike, wholesome appearance and atmosphere, and with a cost as reasonable as is consistent with good work.

"Before describing the requirements of the first unit, let it be known there are now on the premises a number of cottages accommodating about 30 guests, and that said cottages will, for the time being, continue to serve, insofar as guest rooms are concerned. Note cottages in central portion of property may be moved if deemed necessary.

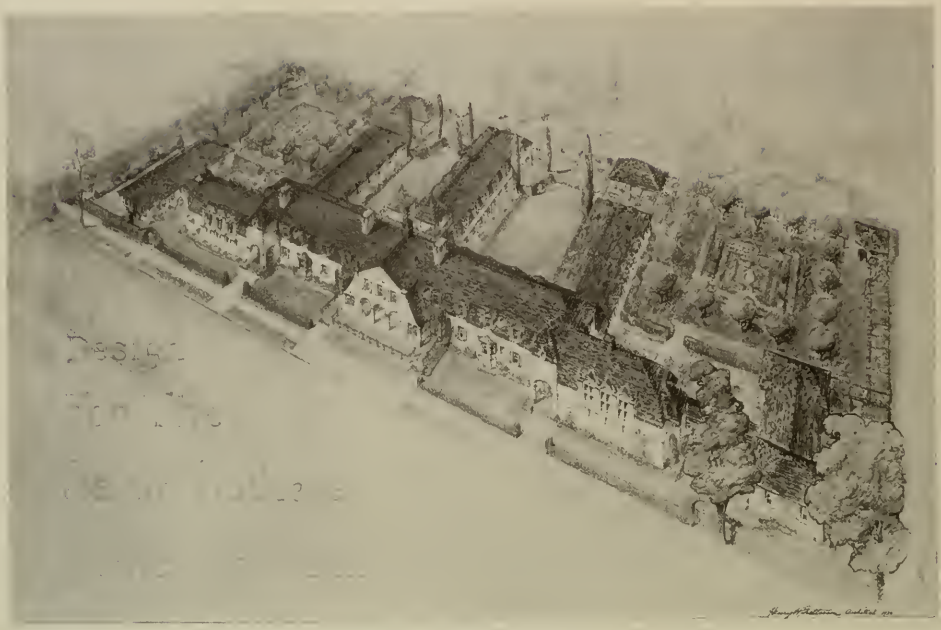
"In the list of conditions following, mandatory requirements are underlined;—if locations are mandatory, they are also underlined, thus: *First floor, Lobby*, means that there must be a lobby and that it must be on the first floor.

"BASEMENT — Heating plant (shall be economically expanded for future building needs); work room (repair and carpenter shop); store rooms; laundry; drying room.

"FIRST FLOOR—Lobby; library, office; Board of Directors' room; toilet accommodations for both men and women; Assembly Room for 150 people with small lecture stage and projection booth; dining room for 60 to 80; kitchen; diet kitchen; serving pantry; service porch; kitchen stores; Matron's suite (bedroom, living room and bath); Infirmary (thought should be given a small infirmary to accommodate 10 or 12 people. This might be used for another purpose and the infirmary moved into different quarters at the time of future extension).

"SECOND FLOOR—Fifteen to twenty guest rooms (some with adjoining baths. An arrangement which would permit two rooms and a bath to be turned into a suite would be desirable; four of such suites); diet kitchen; elevator (serving basement and other floors).

"SITE—The site of the building is as follows; roughly a rectangle extending approximately 392 feet along East 29th Street and approximately 182 feet deep. The street number designating this plot is 2361 E. 29th Street. All as depicted on the diagram entitled 'Plat showing topography for Salem Lutheran Home Association of the

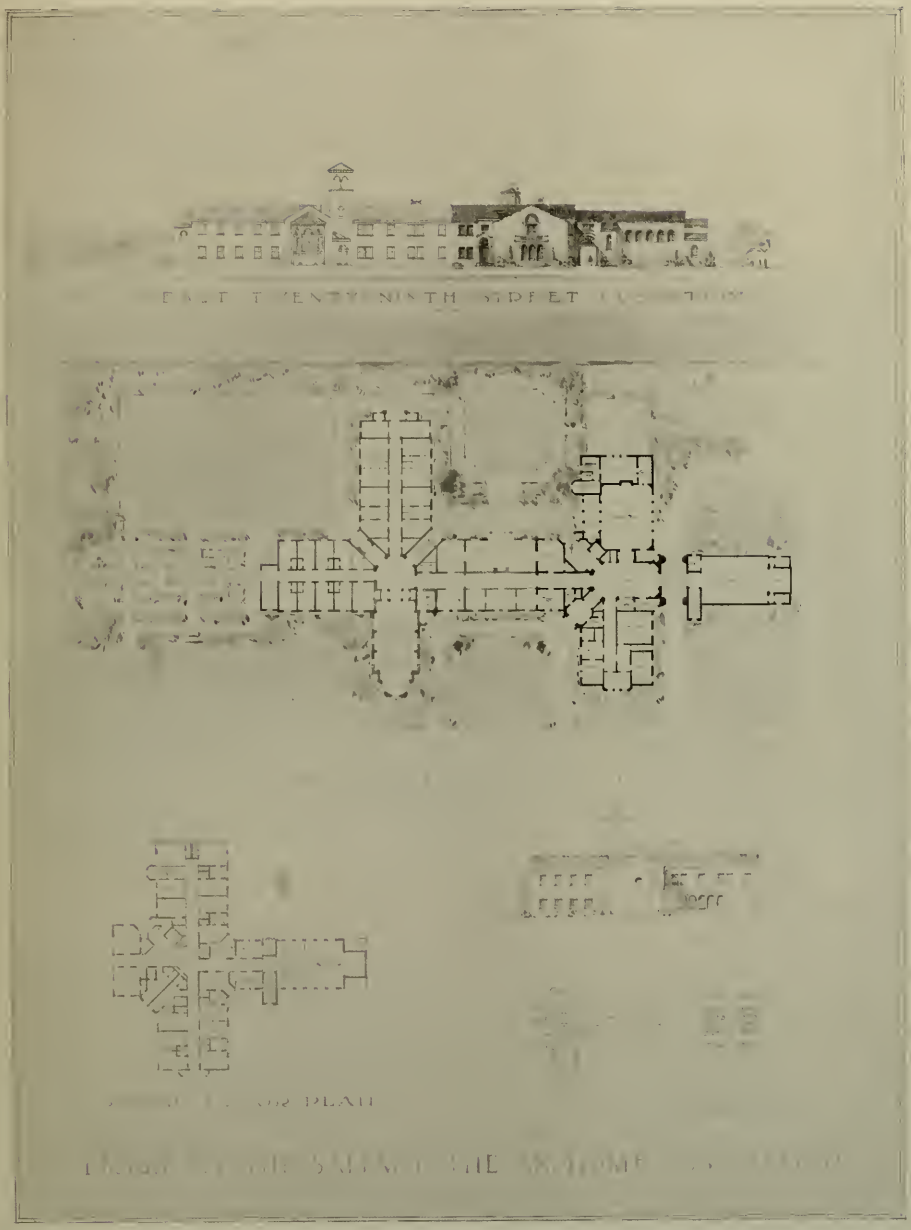


Winning Design

AIRPLANE PERSPECTIVE, SALEM LUTHERAN HOME, OAKLAND
Henry H. Gutterson, Architect

Placed Second

AIRPLANE PERSPECTIVE, SALEM LUTHERAN HOME, OAKLAND
E. Geoffrey Bangs, Architect



Placed Second

ELEVATION AND PLAN, SALEM LUTHERAN HOME, OAKLAND

E. GEOFFREY BANGS, ARCHITECT

Bay Cities' as made by George A. Posey, Civil Engineer — dated March 30, 1930, and numbered 682-27.

"Existing cottages shall be retained for use although one located at central portion of property may be moved if deemed necessary. Chicken house, sheds and garage may be removed.

"*CUBAGE*: (Mandatory) The cubage of the First Unit Shall not exceed one hundred ninety thousand (190,000) cubic feet.

"*DRAWINGS*: (Mandatory) The drawings submitted shall be made according to the following list at the scale given and rendered as noted; and no other drawings than these shall be submitted:

A. Plot plan of entire property and First Floor plan (one drawing) 1/16=1'-0"

B. Second Floor plan—1/16"=1'-0"

C. Twenty-ninth Street Elevation—1/16"=1'-0"

D. North-South Section and/or North-South Elevation—1/16"=1'-0"

E. Aeroplane Perspective.

The Jury's report in full follows:

"This will report of a meeting of the Jury at 2 p. m. May 24, 1930, at which time the drawings submitted were judged with the following results:—

Placed first—Henry H. Gutterson
Placed second—E. Geoffrey Bangs
Placed third—Rollin S. Tuttle

Placed Third

AIRPLANE PERSPECTIVE, SALEM LUTHERAN HOME, OAKLAND
Rollin S. Tuttle, Architect

"*WINNING DESIGN*":

(a) Extremely simple and direct plan of great flexibility and fine possibility for future extensions.

(b) Lutheran character which expresses a homelike quality and fits extremely well in a residence district.

(c) A maximum space is left at south for garden development.

(d) Extremely usable and light entrance lobby.

(e) Regularity in shape of bedrooms.

(f) Good service connection to street at rear.

(g) Possibility of building infirmary

out over dining room and allowing use of remainder of space as deck.

(h) Possibility of separating the sexes when future extensions are made.

(i) Cross ventilation of both dining room and kitchen.

The Jury recognizes the following detrimental qualities:

(a) The presence of a complexity of roof and dormer window system.

(b) Elevators and stairs are crowded and should have more space between them.

(c) At present there will be north bedrooms but when all is complete there will be no more north rooms than in Scheme No. 2, as the future wings have all east and west bedrooms.

"PLACED SECOND":

(a) Complicated diagonal entrance which leaves main lobby and future chapel lobby badly lighted and gives very irregularly shaped rooms, some of which are not well lighted.

(b) Character which is not particularly that of a Lutheran quality. It would seem more institutional and less homelike than the design placed first.

(c) Disposition of buildings which divides up the ground and does not allow the maximum use of same.

"PLACED THIRD":

(a) A homelike character.

(b) No north bedrooms.

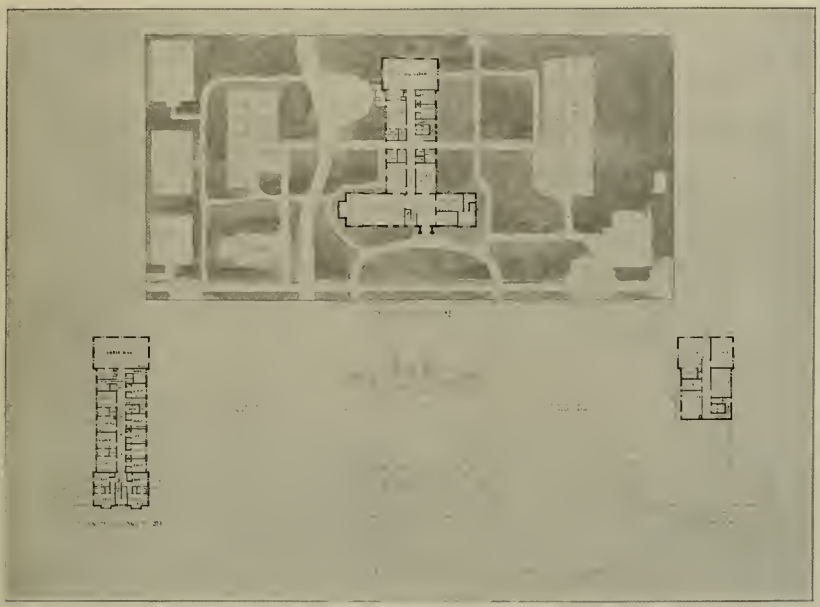
(c) Does not make best use of ground.

(d) No simple protected communication between parts.

(e) A varying of second floor levels which would not seem desirable for use by elderly people.

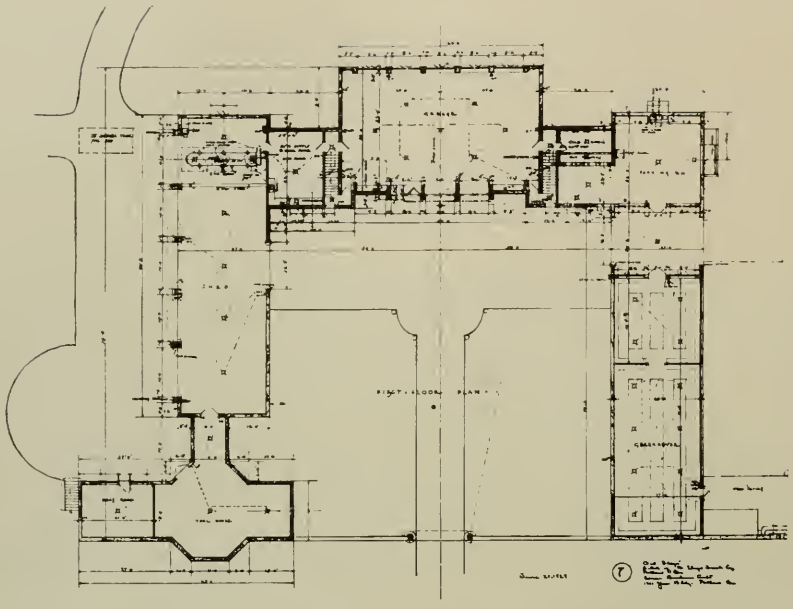
"The Jury wishes to express a high regard for the submitted drawings and to assure the Committee of the splendid result, due in a great measure to their generous approach which limited the competition and gave awards to each competitor.

"The Jury felt the Aeroplane perspective of the scheme placed second particularly noteworthy."



Placed Third

ELEVATION AND PLAN, SALEM LUTHERAN HOME, OAKLAND
Rollin S. Tuttle, Architect



PLAN
OF
OUTBUILDINGS
ESTATE OF
M. LLOYD
FRANK,
PORTLAND,
OREGON
Herman Brookman
Architect

OUTBUILDINGS, ESTATE OF M. LLOYD FRANK, PORTLAND, OREGON
Herman Brookman, Architect

OUTBUILDINGS

On The Estate Of

M. LLOYD FRANK, ESQ.

Portland, Oregon

HERMAN BROOKMAN, Architect

Editor's Note—Other views of the Estate were shown in The Architect and Engineer for April, 1929

BATH HOUSE, ESTATE OF M. LLOYD FRANK
Herman Brookman, Architect

GARAGE ENTRANCE, ESTATE OF M. LLOYD FRANK, PORTLAND
Herman Brookman, Architect

GARAGE AND BELFRY, ESTATE OF M. LLOYD FRANK, PORTLAND, OREGON

HERMAN BROOKMAN, ARCHITECT

TOOL HOUSE WITH DOVE COTE, ESTATE OF M. LLOYD FRANK

HERMAN BROOKMAN, ARCHITECT

TOOL HOUSE, ESTATE OF M. LLOYD FRANK, PORTLAND, OREGON
Herman Brookman, Architect

BATH HOUSE, FROM GAZEBO, ESTATE OF M. LLOYD FRANK, PORTLAND, OREGON
Herman Brookman, Architect

THE SUPER SERVICE STATION OF TODAY

BY T. L. LINGHAM

Designs by Author

NUMERICALLY, there will always be a preponderance of single unit service stations and those carrying a striking note of individuality will enjoy the greatest success. There is, however, an increasing tendency toward super-facility stations, particularly in the metropolitan areas, as well as in smaller cities and towns.

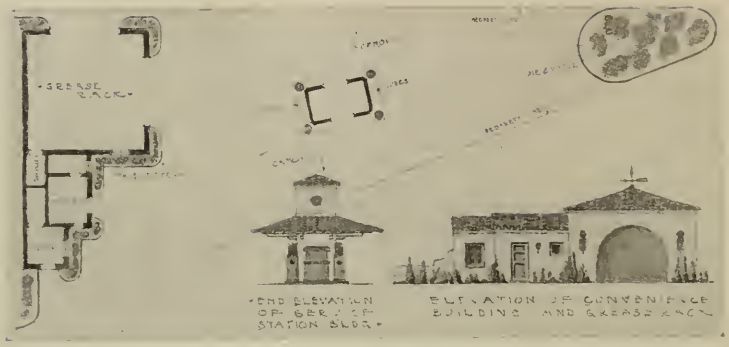
I am not quite sure where the thought of the super station originated, but it is my recollection that we may thank Southern California for this progressive step in station design and business.

As with the single units, great concern should be given the choice of location, with somewhat more study, in order to be assured that a steady day-in-and-day-out clientele will patronize any projected super service station.

My observations have lead me to think that the most desirable site for this type of one-stop station should be located between the heart of the business section (on one of the main arteries leading therefrom) and the best residential section of the community. There are two obvious reasons for this conclusion—first, business men will be in a position either to leave their cars at the station on the way to their offices or stores in the morning, or, at very little inconvenience to either side, telephone and have the cars returned to the station for servicing during the day, and pick them up on their return home for supper; second, cars may be driven to the station from residences without serious inconvenience, especially where the effort involves the feminine head of the household. When the car is driven by an employee of a station from the home, then Mrs. Smith or Mrs. Brown may walk a reasonable distance to the station and pick up the car on the way to shop or theater.

Many super stations have been located very close to the heart of business sections,

ELEVATION, SUPER SERVICE STATION FOR SHELL OIL COMPANY
T. L. Lingham, Designer



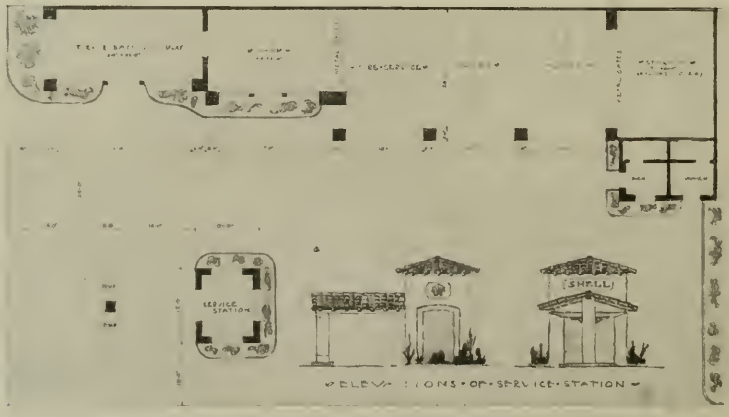
PLAN AND ELEVATION, SUPER SERVICE STATION FOR SHELL OIL COMPANY
T. L. Lingham, Designer

and such a choice invariably works advantageously. This is the case if the residential section is far removed from the downtown area; vice versa, where the size of any well-developed residential section warrants, these stations may be profitably located as close to the heart as possible.

The principal theory back of the super idea is the advantage of offering a complete one-stop service to motorists who have become accustomed to eliminating much of the fuss of keeping up their cars, both mechanically, and from an appearance standpoint. Everyone likes service, and the more complete this can be, the better the average motorist likes it.

Motor car statistics indicate an astonishing number of families on the Pacific Coast owning two or more cars. This condition is another point in favor of the super station in that each car in the family may be left for regular inspection and service attention without seriously discommoding any member of the household.

The general lay-out of the super station is fairly well-established, with the gasoline service unit out in front, whether on the corner or an inside lot, and so located that



ELEVATIONS, SUPER SERVICE STATION FOR SHELL OIL COMPANY
T. L. Lingham, Designer

not only is the motorist allowed to drive in or out without effort, but so that he can do so without interfering in any way with cars being serviced by the other departments.

The point that should be given much consideration as far as the station unit is concerned is that the design should be such that this building will not obstruct the vision of the various concessions which go to make up the super service end. In other words, as clear a vision as possible should be allowed through the service station so that passing motorists will easily spot the tire shop, grease and wash racks, and the battery shop; also, when these are seen, motorists stopping at the station for gasoline and oil supplies can be sold on the other service features of the station more easily while the conversation is being held.

After the property has been selected, with due regard to the ample space required for maneuvering cars on the lot, a great deal of thought should be given the actual lay-out plans to preclude the possibility of blockading drive-ways, affording easy and ready access to and from each concession, and to place the principal super facilities correctly and with a reasonable allotment of space to allow for present and expanded business.

It is most essential that before the design of a super station is attempted, determination be made as to what businesses are to occupy the concessions, and further, that the amount of space necessary for each occupant be definitely settled. This precaution will obviate the possibility of misunderstanding between the owner and operators, and naturally assist greatly in apportioning space, and properly locating each branch of the business.

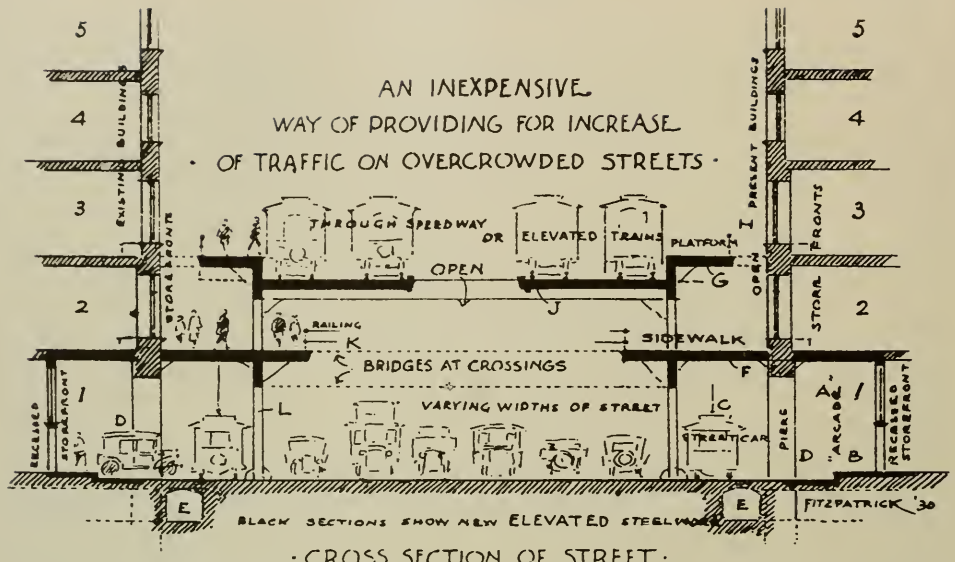
One of the serious faults of many of the super stations is the shallowness of super buildings, which prohibits driving the car completely under the roof. This error is particularly noticeable during inclement weather, and where grease containers, wash rack equipment, or tire-changing paraphernalia placed against the back wall, force the rear of the car to protrude into the rain.

Of course the ensemble should not only be very distinctive (where possible, typifying the predominant feeling of the section of the country in which it is located), but it especially should not carry a harsh note in design when located in or near residential areas because a large proportion of super station clientele are discerning women.

Very often men who have an ambition eventually to get into the super station business have not the present funds for this rather expensive development. Provided the lot is sufficiently large to accommodate super facilities, there is no good reason why the service station may not be built, and as the business prospers, super buildings added and made to harmonize completely. In all such cases, it is natural to propose that the entire future station be designed *originally* so that the additions may be built, whenever possible, without any undue concern as to their feasibility.

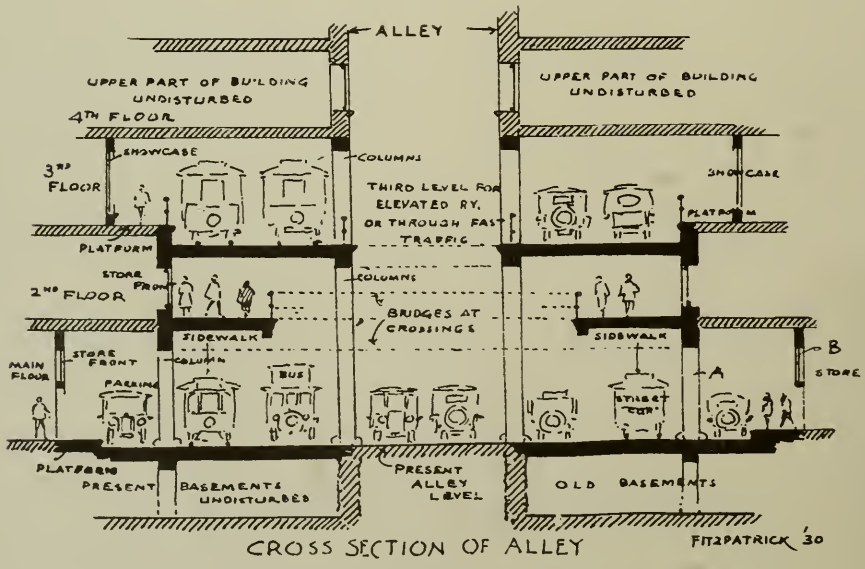
Where either the size of the property or its location does not warrant the fulfilment of the complete super service idea, then the station unit, along with the chief concession, may be built. A sketch of such a station is shown in this article. This station was designed for a narrow-gore lot on one of our main highways.

There still appears to be ample room for super station development in the west, not only on new sites, but by expanding present layouts where space warrants and a trade survey indicates the necessity.



SCHEME A. SUBSTITUTE PLAN FOR SUBWAY TO RELIEVE TRAFFIC CONGESTION

F. W. Fitzpatrick, Consulting Architect



Black sections indicate new structural work.

PLAN FOR USING ALLEYS OR LANES FOR TRAFFIC RELIEF

F. W. Fitzpatrick, Consulting Architect

UTILIZATION *of* LANES *for* TRAFFIC

BY F. W. FITZPATRICK, Consulting Architect

Chicago recently voted for a subway and the city has issued bonds to meet the expense. They'll spend a milion or more, crumple up a building or two, kill a few people and abandon the subway. London, Paris, New York, have tried it. Yes, subways are possible with good clay, chalk and rock, but Chicago is on 75 feet of oozy muck, an old lake bottom. The newer buildings are on caissoned foundations to hard pan, but nearly all the old ones are on crib or floating grille foundations calculated to sink under building load to so and so. Some did, some are down a couple of feet more and you go down steps to the main floor. Others are skew gee; not so bad as Pisa but lopped over. Dig down beside or under those foundations and you are playing with death, property damage, and what not.

Scheme A is what I offered as a substitute for a subway: a widened street and three stories of 'elevated structure.' Later I thought of alleys, or lanes, a much better plan still, costing far less, leaving streets alone and consequently no loss of business for a year or so during construction. This scheme ought to work out well in San Francisco, Los Angeles and other Pacific Coast cities.

AS soon as cities outgrow their village streets, the "first-aid" thought of is to widen the most travelled thoroughfares and, of course, the orthodox way, the customary process is to condemn one side of that street and tear down the front parts of all the buildings back to the new line,* a procedure that calls for the expenditure of millions on the part of the city for the purchase of condemned property, to say nothing of the financial loss to the property owners while their buildings are being abbreviated.

The next step will be a subway for rapid transit. Certainly a subway, for have not London and Paris and New York subways? And surely Bohunktown must have one to keep in the class it thinks it belongs to. So subway it is, a gloomy, maddeningly noisy and noisome burrow.

But there is a better way, a bit new, so therefore not to be considered for a certain number of probationary years. All worth while improvements have to be kept on ice for a more or less lengthy period. Fire prevention, for instance, was discussed and cussed for nearly thirty years, then adopted officially, though we still permit a loss of half a billion dollars a year by fire!

But let us back to our streets.

If you simply must widen them, don't raze the fronts of your buildings, paying millions for that right, more millions for the work, and losing more millions the while by virtually stopping business on that thoroughfare.

A simpler and less expensive way is to buy a strip of private property each side of the street, one story high, and where business buildings occur buy the first story rights back to that line. Leave columns supporting the facing wall, then set the store fronts back on the new line and you have a sidewalk under cover, from the old line back to the new line, arcades, if you please, and roadway widened so that the curb is on the old property line. Simple?

But to provide for future expansion of traffic too, not just the present overcrowding, do something just as simple and inexpensive. Leave the streets as they are.

My plan is (instead of tearing down the front parts of one side of a street), merely for the city to buy and use the *back* ends of buildings abutting on the alleys or lanes,

*In some California cities, including Oakland and Berkeley, it has been found practical and far more economical to lop off a few feet of sidewalk on each side of the street.

varying depths of three stories of those buildings. First a recession of those buildings back to column "A" for two stories, further recessing store "fronts", facing the alley, back to "B", thus giving six or eight lines of traffic on ground level of alley, with the street cars not in the center but beside column "A", with a narrow sidewalk just outside of those fronts.

The next level would be sidewalks for pedestrian traffic exclusively, and store "fronts" to the buildings at column "A". Then a third level for four lines of elevated tracks on some alleys, or for four lines of vehicular, motor traffic, fast, through, or speedway traffic, with subsidiary sidewalks or platforms for foot traffic. The store fronts at that level recessed back of line "A" for those sidewalks.

Note that the alley is lighted down to grade, just as it is without elevated structures; and note also that all those tracks and elevated structures are *within* the outside space in those buildings, true, but note, too, that we would be making high class thoroughfares of the alleys so treated and the owners of buildings would gain the advantage of three new lines of levels of valuable store frontage.

To my mind, a very low cost and wonderfully advantageous means of relieving street traffic, and giving pedestrians absolute safety, all in a structure that is out of doors, though inside and sheltered, that has both natural light and air, can be made most artistic as well as useful, that costs the least of all projects of expansion, entails no loss of business during construction, and adds tremendously to the value of the property through which it passes.

There would be problems of access via escalators and stairs, and ramps to the crossing streets, the location of stations at crossing streets, or also inside abutting buildings, but nothing that ought to bother a clever engineer. I consider it the best solution of the traffic problem so far presented.

PARK LANE APARTMENTS [REMODELLED], SAN FRANCISCO

Arnold Constable, Architect

SPAIN

A Portfolio of Camera Sketches

by Lothar C. Maurer

II. *Patios*

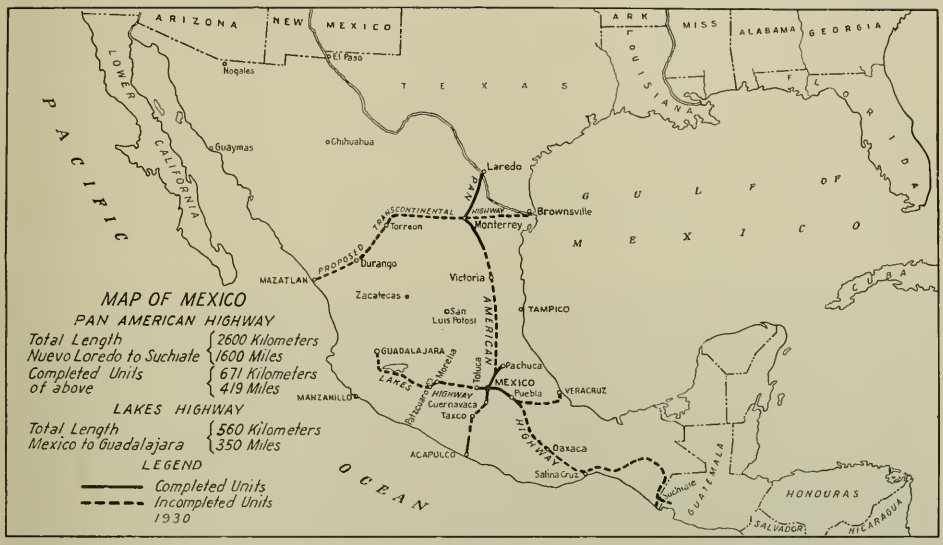
WELL HEAD IN PATIO OF SMALL HOUSE, PALMA DEL RIO

TANGIER

PATIO OF SMALL HOUSE, PALMA DEL RIO

GARDEN WALK OF COLORED PEBBLES, CORDOVA

PATIO OF SMALL HOUSE, PALMA DEL RIO



NEW HIGHWAYS IN OLD MEXICO

BY EMERSON KNIGHT, Landscape Architect

DURING the spring and summer of 1929, experiencing a keen desire to visit and know Mexico, I read eagerly much that could enlighten me on that country, and was further encouraged by maps and data furnished by San Francisco officials of the Southern Pacific Railway and the National Railways of Mexico. The agent of the latter told me that Senor Luis Montes de Oca, Secretary of the Treasury, and Senor Javier Sanchez Mejorada, then Secretary of Communications in Mexico, were men of vision who conceived noble plans for the conservation of forests and magnificent virgin territory in National Park form; also for reforestation and the preservation of archeological, historical and artistic treasures of the Aztec and Colonial periods.

At the close of August, stimulated to the point of adventure, I trained down the West Coast of Mexico—Southern Pacific Route—taking photographs of native customs and architecture, as far as Guadalajara. Continuing by train from there to Mexico City, over the National Lines, I

secured conferences in the capital with officials of that Federal owned system, and with the above mentioned Federal Secretaries. It was through the courtesy of these latter officials that I was given the privilege of examining in detail the completed units of the National Highways of Mexico.

In the fall of 1925, the Republic of Mexico and the Department of Communications, had given birth in the Federal District, to a splendid son, the Comision Nacional de Caminos or National Highway Commission. This hardy child waxed strong, quickly doffing its swaddling clothes to crawl and soon began reaching its supple limbs widely over the land, in modern motor roads. Already, less than five years old, traffic courses through healthful arteries, over an aggregate distance of 1100 kilometers or 688 miles.

The heart of this boy beats in Mexico City, the Capital. His body strides erect, the left arm stretching far north through Monterrey to Nuevo Laredo on the International Border, while the right, now in process of developing, reaches westward through Toluca, toward Guadalajara. The right leg extends due south via Cuernavaca to Acapulco on the Pacific, while the left, thrown backward to the east, is matured as far as Puebla but will continue through Oaxaca to Guatemala.

We have cause for amazement when we consider the difficulties which the sterling parents have overcome in rearing this phenomenal child. With so many offspring to be fed, clothed and educated, it is remarkable that this one has fared so well. Funds were limited, but because those given over to this development were honestly, wisely administered, and because the peso in Mexico goes much farther relatively, in paying for labor, than our dollar, big results have been achieved with comparatively small expense. Cooperation and enthusiasm counted heavily. Mexico

The Aqueduct of Los Remedios, built in 1916 is a vast structure of hard, white volcanic stone. A thousand feet long with fifty arches ranging up to sixty feet high, it spans a saddle between two great canyons. Photograph by author.

sent thoroughly trained engineers abroad to learn just what was being done in latest highway construction in other countries, especially in the United States. These engineers were intelligent, observing, shrewd. They noted the mistakes of their neighbors and profited by them. They returned with high resolution—with the result that already, Mexico's highway system deserves the commendation of the whole world.

much within a given unit but when oiling is scheduled, a separate or distinct formula determining the specific gravity for the oil which is to be used as a binder—is prepared to solve each individual problem. They are therefore, bituminous in character. All work evidences mature engineering and scientific practice.

The motorist contemplating a tour in Mexico will naturally make inquiry into

Sluice Gate House with dome on the left and Shrine, on the right, built of stone, and Spanish Colonial in design. On the Pachuca Highway which passes between two long stone dykes. Photograph by the author.

Let us examine the location of these new roads which has been carefully studied with resulting easy grades. In construction they have excellent foundations, surfacing, culverts and bridges. Drainage is thoroughly taken care of, a vital factor in maintenance, in Mexico where storms of torrential proportions arise suddenly. Because stone and gravel are employed from the nearest available cliffs, quarries and pits along the course, the highways and retaining walls express fitness by being indigenous. The surfacing material thus sometimes varies

the price of gasoline, the frequency of garages, service stations, potential hotel and auto camp facilities, besides effective, rambling routes. It is easy to answer these questions because this system of new highways is so young and immature. Mexico is not yet in position to offer the world luxurious hotel accommodations and in many places cannot even guarantee reasonable comfort. The units of finished highways are not yet calculated to provide ideal circuit tours, the cross roads being rough and quite impassable in the rainy season. Serv-

The Parochial Church of Taxco, built by Jose de la Borda, was completed in 1757. The stone is of a warm buff color tinged with pink and the carvings are rich, both on the exterior and interior. The dome is of polychrome glazed tile in yellow, green and blue. Photograph by author.

The National Highway approach to the Aztec Pyramid of the Sun, at San Juan Teotihuacan. This ancient structure, impressive in magnitude, is 761 feet by 721 feet at the base and 216 feet high. It dominates a collection of varied Aztec ruins so vast in extent as to stagger the imagination. Photograph by the author.

Massive Colonial stone bridge on the historic Borda Stone Highway, between Cuernavaca and Taxco, on the main route from Mexico City to Acapulco. Note shrubbery growing out of the masonry, nourished by heavy seasonal rains. Photograph by the author.

ice stations are far apart and the cost of gasoline is high. Yet for those who are willing to meet some inconvenience and odd circumstances in motoring, the reward is great beyond expectation.

With a wealth of natural, magnificent scenery in plains, forests, mountains, valleys, lakes, seashore and clouds; in its treasures of Aztec and Spanish Colonial architecture; and on account of its revelation of quaint, colorful customs among the Indians, Mexico abounds in surprises and in beauty that stir imagination, appreciation and inspiration to the highest levels. Because it is so utterly different from our United States in topography, scenery, climate and customs, as well as in flora and fauna, it is like a vast volume of Nature to be opened and read and absorbed—until we gain a new comprehension of our North America as a whole.

Its people I found to be sincerely interested in the traveller—courteous, kindly and hospitable. When a car becomes mired on a muddy road they are generous in giving aid. Very fascinating are the hand made wares which they vend, varying greatly in different localities. The men dress much in white with soft, wide spreading sombreros and bare feet or sandals. Their faded serapes, worn with careless grace and dignity, give outward color and inward warmth. Women are fond of black, especially in the mantilla or universal head dress, but this color is also employed in honor of departed relatives. Both sexes carry astounding loads of picturesque wares with greatest ease, even on a run. Those in better circumstances own burros. Children are numerous, eager, brown-eyed, barelegged, healthful and happy. The features of the Indian express age-old sadness, even in song. But their faces register swift changes and kindle into brightness in hours of gay humor or festival—when soft laughter breaks through pathos.

The Puebla Highway, superb engineering through magnificent scenery, on the climb out of the Valley of Mexico, eastward to the mountain divide beyond which lies the Valley of Puebla. Photograph, courtesy of National Highway Commission of Mexico.

The dry season, from October to February, seems the ideal one for tours. At present, it may be best to engage the use of cars in Mexico for motoring over completed portions of this highway system. Pleasure will be increased no doubt, for those who can afford to transport their own cars via steamer and train. One can drive in from Laredo, Texas, as far as Monterrey, now, over a fine stretch of road, but this trip is only 230 kilometers, (144 miles). The most convenient harbors in relation to Central Mexico, for those who wish to ship in their cars, are Manzanillo and Mazatlan on the West Coast and Vera Cruz on the Gulf of Mexico. But within a few years, the system of Federal highways will be so amplified as to provide varying round trips for motorists, over fascinating routes lined with historical bridges and other monuments, which link the population centers. By that time quite probably, good hotels, attractive, well planned automobile camps and an effective distribution of service stations, will render motoring there convenient and gratifying.

Mexico City can offer hospitality to travellers in a number of quite comfortable hotels such as the Regis, Ritz, Geneve, Man-

cera or Imperial. Delighting in the beautiful Capital as a center the tourist can enjoy variety in a number of one-day outings over well built units of Federal Highways. Among the shorter trips, one of the most enchanting is a visit to the Aztec monuments of a remote age which include the Pyramids of the Sun and Moon, at San Juan Teotihuacan. Situated northeast of the city they are reached in about one hour. The immense Aztec ruins spread over such an area that one must be energetic in both walking and climbing in order to explore them thoroughly. They lie on a high plain strewn with the native pepper trees and surrounded by isolated peaks, some of them flat crowned, the latter being singularly harmonious with the long horizontal lines of the Indian structures. Among these overwhelming architectural remains, one can easily become lost in conjecture, the golden hours slipping away while one muses over the comparatively little known life and achievements of an ancient and remarkable civilization. The thoughtful man will feel humble yet very grateful for such impressive evidence of the daring and knowledge of the Aztec builders.

A delightful holiday, still further to the north, may be taken over the Pachuca Highway, a part of the generously conceived backbone highway of the Republic. Along this superbly constructed pavement are rows of glorious white poplars which lean toward each other with conferring grace, as lovely as arching elms. Kilometer monuments of incised stone, bridges and haciendas enroute, all are of Colonial design. At Colonia, six miles before reaching Pachuca, one diverges from the Pan-American Highway. At this junction where all is now barren, I suggested a triangular park—its trees to shade a colonial fountain and benches. Pachuca, 93 kilometers or 58 miles from Mexico City, was a silver mining town of Imperial importance long before Cortez and his Conquerors entered the Valley of Mexico. It lacks beauty now but is worth visiting because by passing on and upwards into the mountains one can explore the noble El Chico National Forest, four thousand acres of Oyamel or white firs. Precipitous cliffs enhance by contrast the sweeping lines of the forested ridges. Beyond intimate woodlands deep carpeted with ferns, the town of El Chico, quaint in repose, marks the beginning of low rolling lands, a far vision of magnificent Mexico.

Among the new highways radiating from the Capital, one of the most beautiful scenically and interesting historically is that leading eastward to Cholula and Puebla, cities blazoned with fame in the days of the Spanish Conquest. Leaving Mexico City, one passes along the high, level floor of the Valley of Mexico, 7350 feet above the sea, around the south shore of the extensive Lake of Texcoco. Soon there is a gradual rise along a portion of the road rendered strikingly lovely by the trees bordering it. Then a long climb is begun in earnest, the road, supported at intervals by stone walls, winding high into the mountains past rock-bound canyons and forests

Tunnel cut through solid stone, in wild Zopelote Canyon, in the State of Guerrero, on the major highway from Mexico City to Acapulco, one of the finest natural harbors on the Pacific. Photograph, courtesy of National Highway Commission of Mexico.

of scattered pines until a superb view is unfolded over the Valley of Mexico westward. Charming, unexpected glimpses are opened occasionally to the snowcrested peaks of El Ixtaccihuatl, El Popocatapetl and Malinche Mountain, three of the loftiest and noblest summits of the Republic. After crossing the Divide at Llano Grande, nearly 10,000 feet above sea level, a sweeping prospect is revealed over the Valley of Puebla, the road descending through the forest to the broad, barren valley.

After crossing ancient bridges and through a number of picturesque villages teeming with energetic natives, Cholula with its 50 churches and patriarchial ash trees, gladdens the soul. Continuing but a few miles farther through the dry, sunflooded land, one rolls into Puebla, full of treasures in Colonial houses and churches, cool plazas, and factories famous for their polychrome glazed tiles. The Cathedral, next in size and importance to that of Mexico City, is impressively beautiful both without and within, the woodcarving, gold, bronze and ironwork and paintings of the interior being worth careful and zealous study. Because Puebla is replete with riches, it deserves leisurely exploration—lingering there a week, or longer. It is clean and progressive as well as romantic, being the Capital of the State of Puebla with 100,000 inhabitants.

No tourist would consider a stay in Mexico City complete without making pilgrimage to the Convento of the Desierto de Los Leones, in the vast Desierto National Forest of firs in the mountains west of the Capital. Passing the Chapultepec Gardens, the highway ascends through an eroded country from which is commanded a rapturous view of the Great White City. After climbing through the Village of Santa Fe, and attaining an elevation of some 9500 feet, one soon enters the forest and environs of the convento ruins in its heart. These historic buildings, of heavy masonry construction in need of better preservation, are situated high in the heart of the fir forest of nearly four thousand acres. The ruins are reverently visited by thousands, ample provision being made for extensive picnicking with refreshments at hand. The journey can be continued in a one-day outing, down the western slopes of the forest to the village of Lerma and a few miles farther into Toluca, Capital of the State of Mexico and 8760 feet above the sea. An imposing monument to Christopher Columbus adorns a glorieta in the Paseo de Reforma there. Because of rapid changes in topography and striking scenic effects, especially of the Nevada de Toluca, a lone, resplendent peak with its cone shaped, snowcrowned crater, this outing will prove memorable.

Few people who inform themselves concerning Mexico in advance, will fail to include Cuernavaca in their schedule of trips from the Capital. The name will spell magic in their minds, as does Tivoli when in Rome. The motor ride over the mountains southward is inspirational in beauty. Rising toward the divide, one pauses on a great circular parking terrace or mirador for a last look over the entrancing Valley of Mexico and sees, near the base of sheer slopes, the forest of Sauz machos outlining with patterned grace, the canals of Xochimilco. At this mirador I proposed treatment in the form of a grand circle, a central bed (with low planting) to facilitate the rotation of traffic; a walk and low parapet wall of stone flanked by a native hedge to define the periphery; and where the circle unites with the highway on either side, two stone kioscos or belvederes, massive in design, their round arches cleaving the intense azure of the Mexican sky.—The curving road continues over bare, windswept heights but soon seeks a friendlier atmosphere, descending through a pine forest, pungent and magnificent. Through this forest, at intervals, alluring glimpses over the mild, warm Valley of Cuernavaca, give promise. As the motorist approaches the town, the Indians will prod their laden burros off the course for modern swift vehicles. Cuernavaca with its admirable, formal Borda Gardens, colorful market, venerable churches, narrow thoroughfares, fountains and rock-walled tropical lanes—tranquilly recalls its past, breathing romance through its very stones. The air is mild and luminous, invit-

ing one to tarry days or even weeks. But if one should answer the call to adventure farther southward, a Colonial feast, challenging description awaits him in Taxco—a revelation of centuries in its mountain fastness, and farther still, by passing the Balsas River, through the Zopilote Canyon to Chilpancingo, one will finally be deeply stirred by a sunset over the Pacific from the rugged cliffs of Acapulco. The wilds of the State of Guerrero are dramatic, thrilling with tropical beauty. A whole week must be allowed from the Capital for this unforgettable jaunt of 288 miles each way.

A stone bridge less than one century old, in Spanish Colonial spirit, which spans a creek on the Pachuca Highway. Two great white poplars enframe the structure. Photograph by the author.

Closer to Mexico City are two journeys of exceeding interest, which consume about an hour each, in the one-way trip. That to the Church and Aqueduct of Los Remedios lies to the northwest via Tacuba. Pilgrimage is made to the old church dominating a high knoll but not nearly so many worshippers frequent it as the "Church of Our Lady of Guadalupe" in the village of the same name. Passing beyond Los Remedios Church and climbing to higher ground unfolds a magnificent panorama over two great canadas or canyons, with the colossal Los Remedios Aqueduct spanning a saddle in the wall between them. This monumental structure of solid white volcanic stone, dates from 1610 and is in a perfect state of preservation. About a thousand feet long, with many graceful arches of uniform proportions, it is an impressive example of beauty, grace and rhythm. I recommended that this aqueduct and its entire setting of canyons and background of forests extending into lofty mountains—as far as the sky line—be created into a National Park, especially to serve as a recreational outlet for the people of the heart of Mexico.

The other goal, lying south of the Capital is called Xochimilco, a unique, frequented place revealing a phantom loveli-

ness, an Arcady of Mexico. The site of a lake, it is a region of innumerable canals, some stately and straight, others narrow and winding, between which are gardens intensively developed to the degree of compelling charm. Some of the plots are entirely devoted to vegetables, with order immaculate while others breathe the spirit and fragrance of colorful flowers. Guarding these are the straight, slender Sauz macho trees which line the canals, stretching their arms like haunting fairies to the ever changing skies and clouds. One can float in utter quiet here by means of row boats or gain swifter impressions from launches. Entire Indian families may be seen, eating and drinking, lounging or making music in their barges, their lives complete on the water. While realizing joy through relaxation here, one senses fleeting beauty, illusive charm. Mystery and a certain feeling of wistfulness is imparted by the eerie trees, the lapping waters and even the laughing or brooding skies. To know Xochimilco is to comprehend something of the spirit, the magic of Mexico and her people.

A VILLAGE STREET
Photo by Alex Keighley

THE ORGAN IN THE HOME

BY J. B. JAMISON

A GENERAL impression concerning residence organs is that they cost so much that comparatively few people can afford them. When it is considered that every organ owner would part with almost anything he had before he would give up the instrument that has yielded him such measure of entertainment, education, pride and beauty, it may be interesting to know that the legend of prohibitive price is largely a myth, and that delightful organs are now being built that will reproduce exactly the interpretations of the best organists, as recorded in libraries of well over a thousand rolls, for from $5000 up.

There is no good reason why the architect should not consider such an organ as a very possible part of the modern residence of average cost, or deny himself the afforded opportunity for beautifying his work, or his client the chance for such enjoyment. There is no substitute for the genuine, as one hearing will prove, and no longer any excuse for the man of comfortable means being deprived of the one hitherto exclusive possession of the very wealthy.

Whereas it is possible to put almost any amount of money into a residence organ, these small instruments have a surprising variety of tone, an excellent ensemble, and results are so good that one never tires listening to the music.

There are but four general types of pipes and resultant tone. The largest organs contain nothing more than variations of these four primary tone colors, so almost any composition may be played effectively on a small organ, provided the primary tone colors are really distinctive and not merely tints. As one great authority has said, "Hybrid stops are useless. Give the organist a few real colors and he will make his own tints."

The $5000 outfit contains six sets of pipes, two more than the necessary minimum color range, and these are playable at various pitches, some high, some low, and all at the middle or usual pitch. Dozens of beautiful blends and combinations of tone are possible from this limited material. The professional organist will recognize it as a "six set unit" and will bear out the claim that it can be made, with artistic handling and voicing, a very satisfactory instrument indeed, especially for the residence.

The use of pastel shades instead of primary colors has been the great drawback of the residence organ of the past. There has been no possibility of getting virile tones out of them, or any that will hold and interest one whose musical education has passed the kindergarten stage. But conceptions have changed, and tonal and mechanical improvements have been perfected that make it a commercial possibility to build and guarantee a $5000 automatic player organ.

The floor space necessary for such an organ measures eight feet by four feet, six inches and the height can be as low as eight feet. Installation can be provided for in space adjoining, and on the same level as, the listening room; in a balcony; in an upstairs room; in the basement. The vital thing is fairly direct emission of tone into the room where it will be heard. Tone will not turn many corners successfully, and results can be ruined unless certain well understood physical laws are obeyed.

If the installation is on the listening room level, with direct sidewall tone openings, (minimum tonal loss), the organ builder will so regulate the volume as to fit requirements. (Successful installations have been made in small apartments). If in a basement, or at a distance, the pipes will be specially voiced and regulated, so that the volume in the listening room will be the same as when the direct opening, with short carry, is employed. Knowing conditions, and with half a chance, the reliable builder will size up a blue print of a house, meet all such difficulties and guarantee results.

The first thing, in all instances, is to see that the walls and ceiling of the organ chamber are hard, smooth and reflective. Nothing is better than Keen's cement for this purpose. A sand finish plaster, or a soft plaster, is fatal, for not only will it absorb tone and change tone quality, before it is emitted, but it will drop particles into the pipes and injure them.

Pipes speak with the same power at all times. The expression is controlled by opening and closing the "swell shades," which fit into the tone opening, and are shutters from five to nine inches wide and averaging five feet in height. They require half their width as rotation margin, to avoid striking against grilles, etc. It is essential when these shades are closed, that tone does not leak through the walls. A double wall on staggered studs, so that the tone cannot "telephone" through, is ideal. Sometimes it is wise to hang a felt blanket between the walls or mineral wool can be stuffed between two lath and plaster walls with excellent results. No reasonable expense is to be avoided in insuring a sound-tight room, for the success of the organ is dependent on the range from soft to loud. The following suggestions will be found valuable to architects in making provisions for an organ installation:

The organ is operated by a "blower" and generator. Both are driven by an electric motor. The average small organ requires a two horse power motor. City regulations demand that it be equipped with a remote control starting device with the usual conduits. Starting switch is located in the blower room, while the push button switch is at or near the console. Connecting blower and organ room should be a round galvanized iron pipe at least twenty-four gauge and twelve inches diameter, guaranteed air tight by the sheet metal contractor. To the console or player cabinet should be run a three-inch pipe of similar nature. The motor will turn about 900 revolutions per minute and will be noisy. Where at all possible, locate it at some distance from the listening room. A double wall Celotex housing will silence it. Build it a six-foot cube with a flap opening, one foot square. Flap is hinged loosely and hangs on inside wall. Never locate the blower where it is cold, damp or dirty. Never place it near an oil furnace, for gases will be drawn through the organ and condense on the iron magnet armatures, causing them to fail and need cleaning. A silencer, similar in principle to an automobile muffler can be installed in blower pipe (wind trunk) and stop all noise of the machine from being transmitted through trunk. This can be supplied by the organ builder at additional cost and is now advisable for best results.

The tone opening from chamber to listening room should always be as large as conditions permit. If possible, put it on the wide side of chamber. A long narrow chamber with opening on the narrow end is to be avoided. If opening is direct, through a side wall into listening room, it should extend to within a foot of organ room ceiling, to avoid an acoustic pocket. It need not begin less than two feet from the organ room floor. If basement installation is made, a chute not less than two feet deep by five to six feet wide, (smoothly finished with Keen's cement) may lead from one end of ceiling of organ room and emerge into listening room in the form of a vertical grille or opening, of not less than thirty square feet gross area. Just figure to get the shortest, most direct path for the tone, avoid absorption on the way, and make the grille as porous as you can. Fifty-fifty is the absolute minimum of net opening.

Organ spaces are preferably rectangular. The chests on which the pipes stand are that shape. Triangular or curved spaces

are not economical. Contrary to opinion in some quarters, the organ builder does not want more than enough room, as that would result in absorption before emission, but he does need enough to get at his instrument for adjustments and tuning, and pipes will sound better if not crowded.

There are several ways of treating the tone opening in the listening room: The stereotyped ornamental pipes, (none of which should speak) grilles of iron, wood or plaster, and wall hangings. The opening may even be disguised as a book case or some piece of wall furniture. All sorts of opportunities are offered for the architect to show his ingenuity. Many times he will be able to capitalize apparent disaster.

A very unusual installation was planned some years ago with the organ in a basement room, already built in an old house, which was just under the billiard room and table above. It was proposed to cut the floor and install a grille just under, and slightly smaller than the billiard table, run a raised moulding around the grille, and have a curved iron reflector extend across one entire side of the grille to the center of the lower side of the table, and thus shoot the tone towards the living room, some twenty feet distant. There is plenty of precedent for this treatment. Tone has been conveyed more than a hundred feet through a large, smooth, concrete and plaster tube and reflected diagonally into a church auditorium with complete success.

At the home of the writer the organ is in a room eight by twelve, by seventeen feet high, with six feet of this height under the living room floor level, and a tone opening in wall into living room. The opening is ten feet high and ten feet wide, and is completely covered by a monks cloth curtain hung slightly full. A tapestry five feet wide by ten feet high is centered on the curtain. In this case the thickness of cloth cuts down the volume to the right degree, the monks cloth is a very effective (and inexpensive) thing, and makes a good background for a tapestry that alone, would be inadequate, or, if large enough, would be too costly.

A recent installation in Hillsborough, California, is in a magnificent room with very high French doors which slide back and disclose the organ grilles. The console pushes in under the grille, the door closed and nothing remains to indicate the presence of an organ.

The writer has never seen an attic installation that turned out well. It is too far for the tone to travel against unfavorable absorption and remain convincing or natural.

The mystery of how an automatic player organ can reproduce the slightest fancy of the recording artist, in power, tempo and color, is really a very simple matter and may be interesting to understand. By a variety of recording devices, the time each key is depressed is measured, the change of stops registered and the opening and closing of the expression shades recorded. As there is no such thing as "touch" in an organ (a heavy or light stroke on the keys doing nothing more than complete an electrical circuit), every move of the organist is "photographed" exactly when and as he made it. The record thus made consists of a long paper roll, treated to resist temperature and humidity changes, with perforations of various lengths for the notes played, and other perforations for the stops changed and movements of the expression pedals and shades.

As the recording is without whim, and always exact, and the reproduction has to be infallible, no one can correctly call the reproduction of a hand-played record "mechanical." If the record is well played, its beauties are all reproduced. If it is poorly played, the reproduction will show up all the faults of the organist with disconcerting frankness. Organists of the first grade are employed at considerable expense to make the records, and a criticism of the reproduction is a criticism of the organist.

As the mechanism has a hundred fingers instead of merely ten, it is of course possible to arrange orchestral scores for the organ that could not possibly be played by one man, and when this is well done the results are surprisingly fine.

There is a dignity that attaches to an organ in the home that nothing else can lend. It is a reflection of the owner's refinement.

A COLORFUL PATIO BY R. H. CRAWFORD

SUMMER SKETCHES

in the

PACIFIC NORTHWEST

by

RALPH J. BISHOP

AN ALLEY SHACK

MOTOR BOAT AT ITS MOORINGS

Sketch with Conté Pencil

AN ALLEY IN A NORTHWEST CITY

"TIDE-FLATS," TACOMA, WASHINGTON

Sketch drawn with Wolff Carbon Pencil

AGE OF BETTER CITY PLANNING IS HERE, SAYS CHENEY

EVIDENCE that at last "some cities are pulling out of their dreadful frontier" is beginning to appear, according to a report of the Committee on City and Regional Planning of the American Institute of Architects, made public by the President of the Institute, Robert D. Kohn.

The report, prepared by the Chairman of the Committee, Charles H. Cheney of Los Angeles, asserts that "the pioneering era of ugliness" is slowly passing, and that municipalities "are attempting to take some pride in themselves." Washington, it was declared, has provided an example for the nation under the leadership of President Hoover and Secretary Mellon.

Major traffic street plans, involving the expenditure of hundreds of millions of dollars, have been completed in 144 cities, and started in sixty-four cities.

"The difficulty with major street plans," the report said, "is to establish future street lines so that new structures will not go up in the path of necessary openings and widenings. The splendid New York state law prohibits buildings where the major street plan has been officially adopted by the city council. Schnectady has set the pace for the country by adoption of its complete plan. Several other states, including California, now provide methods for such adoption.

"St. Louis continues to develop the most consistent and thorough city planning work of the country, under the direction of City Planner Harland Bartholomew and Architect E. J. Russell, chairman of the Commission. The fundamental factors of this success in planning are thoroughly complete and well prepared technical plans, wide spread public understanding and support, and sympathetic official co-operation in the execution of the plans.

"The smaller cities of the country, even the small towns, need major street plans and other comprehensive plans as badly as the big metropolitan areas. Everywhere the increased use of the automobile, demand for traffic relief, for airports, parks and new and enlarged business centers is requiring enormous changes, particularly in the widening of streets laid out for a horse drawn era.

"Hence major street plans are everywhere causing the cutting down of great avenues of trees for street widenings and extensions. In many cases these tree cuttings are needless and avoidable. Our cities are being denuded of their fine old trees and shelters of greenery and thus become yearly uglier and more forbidding, as these very trees were the only saving grace to cover up the ninety per cent of bad design and poor architecture with which our municipalities are so carelessly filled.

"California now has a law authorizing replanting of trees in the same proceeding that undertakes the widening and improving of highways, and the next few years must see much greater attention on the part of the public and city planner or this generation will long be known as the despoiling age."

Parks, parkways and recreation areas are receiving greater attention, the Committee found. "They now form a necessary part of the master plan of every city, county and region under the new California Planning Act," the report added.

"They have become increasingly so in plans of older states also during the past year. Westchester County, New York, undoubtedly has made the most remarkable recent contribution to the parkways and

park systems of the country. The splendid work in Essex and Union Counties, New Jersey, and the metropolitan park systems of Boston, Cleveland, Chicago, and other centers are still object lessons for the country.

"Both small and large cities increasingly seem to appreciate provision of playgrounds for both children and adults with the centralization of children's playgrounds at schools. More cities are adopting the 10-25-40 standard, that is, ten acres for each elementary school, playground and park, about a mile apart in metropolitan areas; twenty-five acres for junior high school and playfields about every two miles; and forty acres for senior high schools and junior colleges three miles apart.

"Riverside, California, has acquired a number of sites of this size, as have Milwaukee, Fort Wayne and other eastern cities. Gary, Indiana, has a standard of twenty acres for every school site.

"Regional planning activity in the United States has materially increased, particularly in and about Chicago, Los Angeles, Philadelphia and Washington. Many new county planning commissions have been established.

"Airports increasingly demand attention of the city planners, as the country becomes more air-minded, and many cities and counties have voted bonds for the establishment of such ports. Appearance of municipal air terminals from the air and the importance of good looking roofs is now being emphasized by farsighted city planners."

Courtesy Camera Craft

NIGHT PICTURE OF SAN FRANCISCO SKY LINE FROM TELEGRAPH HILL

Photo by Rene P. d' Urbal

The ARCHITECT'S VIEWPOINT

- *Appeal of the Wide Open Spaces*
- *Writing About Architecture for the Public*
- *A City Plan for Portland, Oregon*

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IN the month of August it is difficult, if one lives in what is locally called the "Great Northwest," to think seriously about any subject but Vacationing. How could one desire to ponder and exhort on man's Architecture at a time when every force draws one to God's Architecture — the mountains, the gushing streams, the glorious sea, and strange and luring places.

Please let us not be misunderstood—we are not writing this whilst lolling about in any of the above mentioned parts; merely our thoughts are prone to wander to fishing gear, snow clad peaks, and pretty sail boats. Apparently the architectural journals cannot become Sportsmens' Guides during the wonderous summertime, so therefore, remarks on what kind of bait the fish are taking, and how the road is around Mt. Hood would not be apropos. Nevertheless, it is difficult not to think of those subjects, for they are so interesting.

* * *

IN a recent issue of THE ARCHITECT AND ENGINEER, were some very kind remarks about the work of the Oregon Chapter's Publicity Committee. The reason the praise is enjoyed so much is that the writer is serving as Chairman of that Committee. Now it is painful to admit that the President of the Oregon Chapter holds the Publicity Chairman not in such high esteem, and as Mr. Chic Sale says, "I'll tell you why."

One Portland newspaper, *The Oregon Journal*, called the "bluff" of the architects when the newspapers were accused of lack of support given to Architecture, and stated they would publish all the copy the architects would furnish. Of course, they meant within the bounds of propriety. And now we find it difficult to keep the newspaper supplied with the right kind of subject matter. It is a task to get busy architects to prepare the copy. However, we realize the importance of this work and we hope to carry on, but our President has seen the Committee fail to produce one hundred per cent results.

Although vitamines is one of the newest subjects, and architecture one of the oldest, we venture that the average layman knows most about the former. The newspapers are somewhat responsible for this state, for, although they have maintained on their staffs, drama critics, literary critics, music critics, comic writers and sporting experts, they have not had, to our knowledge, an architectural critic as a regular member of the staff. They have had special columns or pages devoted to most branches of art, except architecture. Surely, architecture is as important and vital to man's well being as are the other arts.

The architects themselves are more to blame for the uninformed condition of the public as regards the art of building than are the newspapers. They have written little for publication in the daily papers about architecture, and most of that which has been written has not been understandable to the average reader. This is no reflection on the latter's intelligence, for, as a famous architect once stated, "It is more difficult to talk to a 'knowing' architect about his theories than it is to chaff a Cardinal." Certainly ar-

chitecture is a subject which can be talked about in terms understandable to the average listener or reader. It is our task to make ourselves understood by those who use strange phrases about art, and by those who do not.

* * *

ONE wonders if the persons who love to make subtle allusions to some of the outward expressions of the Victorian Era realize that the same type of "gimcrackery" exists today. Many of the "silo motifs" on houses of the present day do not differ greatly from the cupolas of the Gay Nineties.

Fortunately the leading architects of our country, or any country, for that matter, have never fostered contrived picturesqueness in their work. However, we have many who do not recognize the cocked hat style when they see it, and love to revel in its exploitation.

A few years ago, what was termed, in Portland, as a rolled shingle roof (thatched effect) was much in demand. One of the leading residence architects here did not like to see good materials abused in that way, and he was always greatly perturbed when a client asked for a shingle thatched roof. But fortunately he thought of this way out. He said, "Do you know, Mr. Jones, the architect who invented shingle thatch doesn't use it any more." This always made a real impression, and the thatch idea was forgotten by the client. Happily, imitation thatch and meaningless turrets are on the wane, but we must expect something else in the same category.

* * *

JUST the other day a brother architect, who is a very talented fellow, remarked that the men who are exponents of the cocked hat style do more to harm the profession than the wildest speculative designer-builder. The public is beginning to respect the title "Architect" and they look for something better from him than from the Universal Plan Service Bureaus. Therefore when an architect of fairly good standing gets really and truly mediaeval it is quite a blow to the profession as a whole.

It is unfortunate that so much publicity has been given to style names and to the exaggerated appearance of age, sometimes referred to as "antiqueing." To dislike this sort of thing is no evidence whatever that there is no reaction within you for the picturesqueness of old Normandy, or the quaintness of the Cotswolds. Perhaps your love is too sincere for these truly old buildings to want to make caricatures of them.

We must educate people to recognize a thing appropriately designed and well suited to its purpose. They must understand the fine fitness of things, and know about finish and good workmanship. Their interest should not be solely in Early American and Late Georgian, but it should be the same sort they have for this year's motor cars.

* * *

THERE is an attempt being made by several of the civic organizations in Portland to employ a well known city planner for the purpose of obtaining a comprehensive plan to guide the growth of the city in logical and orderly channels. There have been plans made before for Portland, but they were never taken seriously enough by the powers that were. The plans of the past were always condemned as "visionary" and "impractical". A good far visioned city plan must always appear ambitious now if it is to be adequate for the future.

It is hoped that this attempt on the part of the civic clubs to obtain a practical plan for Portland is successful, for such a plan is greatly needed here.

HAROLD W. DOTY, A.I.A.

EDITORIAL CHAT

STREET congestion in the business centers of our big metropolitan cities is becoming a very serious problem. Traffic jams are occurring in localities where the tallest buildings stand. The outpour of people from these huge office skyscrapers at lunch and closing hours cause a congestion that is alarming. Something must be done, the authorities say. Some relief has been provided by tunneling under the streets and bringing the people out at different outlets some distance away from the buildings they work in. Another plan is to regulate the outgoing travel so that all the office help do not leave the building simultaneously. Some authorities believe it is only a question of time before the skyscraper will be obliterated.

William B. Faville, architect of San Francisco, who has been spending the summer abroad, recently addressed a gathering of British leaders of the architectural profession at the Savoy Hotel, in London. Mr. Faville declared the skyscraper must go because no city can cope with the problem of transporting their thousands of workers. "The more skyscrapers that are built the worse the traffic jams become," he said, "and if we go on this way the streets will become rigid with traffic that never moves at all!"

The San Francisco architect stated that the disappearance of skyscrapers would compel American architects to think more about horizontal lines and less about ascending ones. He predicted that increased use of metal and color would play a large part in forthcoming developments in American architecture.

* * *

THE sensible man regards a building much as he does a woman. He has a lasting admiration for one that is beautiful, amiable and clever; he soon tires of one that is beautiful but dumb.

It is easy for an architect so to adorn a structure as to give it a spurious sort of beauty. But it is doubtful that a building can have true beauty when its architectural treatment falsifies its structural design and when it fails to fulfill the main purpose of its builders. A writer in *Building Management* says truly that the prime object to be attained by the erection of a commercial building is to produce a profit to the owner. The architect who undertakes the design of such buildings should always keep that prime essential in mind and the owner who puts up his money with the idea of gaining profit from investment should see to it that he selects an architect who recognizes the vital influence of well-planned space, with materials and finish easily maintained in attractive condition, and with suitable equipment for the convenience of tenants.

* * *

NOW comes the announcement that soon Chicago will have an all metal and glass apartment building. This metal building will be much like a meccano set with battle deckfloors, which will permit the addition of one story more than is usually possible within the height limit of the Chicago zoning ordinances. The metal to be used is a new rustless alloy, backed by three-inch slabs of rock wool. It is said that such a wall will not require paint or maintenance for at least thirty years. The interior equipment will be operated almost wholly by electricity which, it is said, will increase the net rentable space fourteen per cent.

THIS CLIENT SAYS, "I CANNOT BUILD WITHOUT AN ARCHITECT"

(Abstract of a letter that tells its own story)

Frederick S. Harrison,
Architect,
Sacramento, California.

Dear Sir:

I would like to talk with you regarding the plans for my house. . . . I find that having an architect helps me in financing the building with the loan company. In fact I don't see how I am going to go ahead without a competent architect. Am unable to find any plans made to order that meet my needs and are within my price.

Yours sincerely,
(Signed) FLORENCE M. JOHNSON.

WITH *the* ARCHITECTS

GYMNASIUM AND STORES

The office of Hardman & Russ, First National Bank Building, Berkeley, has completed plans for a one story hollow tile and brick gymnasium for the City of Berkeley, estimated to cost $50,000. This firm has also prepared plans for a one story hollow tile and brick store building and warehouse at Newman for A. M. Souza. Sketches are being prepared in the same office for an apartment house in West Oakland.

GAS COMPANY'S BUILDINGS

The Pacific Gas & Electric Company is going ahead with its building program as originally planned early in the year. Many California cities are to have new buildings to take care of the Company's local business, including Stockton, Redwood City, Placerville and Auburn. In San Francisco extensive improvements are being made, including a new sub-station at 19th and San Carlos Streets.

CLASS C APARTMENT HOUSE

Albert H. Larson, architect, 447 Sutter Street, San Francisco, has completed plans and specifications for a six story Class C apartment building for the Suncal Investment Company. The location is the northeast corner of Buena Vista Avenue and Waller Streets, San Francisco. There will be thirty-six apartments. The estimated cost is $175,000.

SIX STORY APARTMENT BUILDING

T. D. Fisher, 2851-23rd Avenue, Oakland, is the owner and builder of a six story Class C apartment building to be constructed on Waller Street, north of the Grand Lake Theater, from plans by D. M. Crooks. The estimated cost is $125,000.

W. P. FULLER BUILDING

Plans have been completed by F. T. Georgeson, architect of Eureka, for a Class A store and loft building at Eureka for W. P. Fuller & Company. The structure is to replace a building recently destroyed by fire.

MONTEREY RESIDENCE

W. O. Raiguel, architect, has completed plans for a Spanish type residence to be built in Monterey for Mrs. Arthur Metz. The house will cost $25,000.

ARCHITECT SENT TO JAIL

Refusal to repay $200 which he had collected for plans drawn for the First Baptist Church of Redwood City, to which he is alleged to have represented himself as an architect without a state license, resulted in a 20-day jail sentence for J. G. Lehman.

Sentence was passed by Judge Edward I. McAuliffe at Redwood City, who gave Lehman the alternative of paying a $200 fine. The case was prosecuted by Richard O. Bell, deputy county attorney, with A. L. Bolton, acting as representative of the State Board of Architects.

After hearing the case, Judge McAuliffe found Lehman guilty of practicing without a license and the sentence was passed.

PORTLAND DEPARTMENT STORE

K. W. Rosenberg, of DeYoung, Moscowitz & Rosenberg, New York architectural firm, was in Portland last month to attend the opening of bids for the addition to the Meier & Frank department store. The Dinwiddie Construction Company of San Francisco was awarded the contract at approximately $1,200,000.

TACOMA ARCHITECTS MEET

Pencil sketches by Norman F. Fox and watercolors by Victor N. J. Jones provided the main diversion at a recent luncheon meeting of the Tacoma group of the Washington Chapter of the American Institute of Architects. George Gove acted as master of ceremonies in showing the artistic creations.

WINS STUDENT COMPETITION

John F. Bohac, of Olympia, Wash., won the student architectural prize competition held recently at Washington State College. Second place went to Alexander Bilund of Seattle. Charles Stone, whose home is in Pullman, took third position, while honorable mention was given Homer Childs of Lowell.

SAN FRANCISCO FEDERAL BUILDING

Arthur Brown, Jr., architect of San Francisco, has been commissioned to prepare plans for a four story and basement Class A federal office building in the Civic Center, San Francisco. The appropriation for this structure is $2,800,000.

WILLIAM H. CRIM, JR.

Members of the architectural profession were shocked by the death of William H. Crim, Jr., which occurred at the Lane Hospital, San Francisco, on July 12th.

Mr. Crim suffered a severe illness about a year ago, but it was thought he had completely recovered. The San Francisco architect was fifty-one years of age, and a native of California. He had practiced his profession in the Bay region since 1906. His early architectural training was received in the offices of Percy and Hamilton and Willis Polk. In 1906 he formed a partnership under the name of Crim and Scott, which continued for a period of five years. Since then he practiced alone.

Some of his more important work included a number of Christian Science churches, the El Capitan Theater in the Mission and the Park Presidio School, San Francisco. He was a member of the Bohemian, California Golf Club and Northern California Chapter, A.I.A. His office will be continued under the firm name of W. H. Crim, Jr., E. J. Resing, and J. F. M'Guiness, associated, 488 Pine Street, San Francisco. The firm is at present busy on plans for the James Lick Junior High School group, which is to be erected at 25th and Castro Streets, San Francisco, at a cost of $450,000.

THEODORE W. LENZEN

Theodore W. Lenzen, a pioneer architect of Santa Clara Valley, died at his home in San Francisco in July, following a brief illness. With his father, the late Jacob Lenzen, he designed the Hotel Vendome, Hall of Records and many other large San Jose buildings.

Theodore Lenzen was born in San Jose 65 years ago, studying in local schools and graduating from the College of the Pacific. For years he was a member of the firm of Jacob Lenzen & Son. In 1900 he opened an office in San Francisco where he was active in the practice of his profession up to within a few weeks prior to his death.

Mr. Lenzen was a member of the Native Sons of the Golden West, Odd Fellows, Masons, and The Maccabees. He is survived by his widow, Kate A. Lenzen; two sons, Victor F. and Elmer M. Lenzen; a daughter, Mrs. Charles W. Belton, and a sister, Nettie Lenzen of 64 Pierce Street, San Jose.

DAVID GUNNING

David Gunning, 76, pioneer Los Angeles architect, died at his home, 5437 Virginia Avenue, Los Angeles, June 29, of heart disease. Episcopal services were conducted in the chapel of Inglewood Cemetery, where interment was made. A widow and four children, Clifford Gunning, Miss Alma E. Gunning, Mrs. S. J. Frieman and Mrs. Guy D. Loomis of Los Angeles, survive.

SANTA BARBARA ON THE MAP

An exhibition of photographs and drawings, sponsored by the Santa Barbara architects, was held during July at the Architects' Building Material Exhibit, Fifth and Figueroa Streets, Los Angeles.

The exhibition was given as a tribute to the memory of the late George Washington Smith, and photographs and renderings of the many beautiful homes designed by him were included in the display.

A careful study of proportions and texture and elimination of needless details, seem to be the factors that make the architecture of Santa Barbara distinctive. These are noted not only in the work of Mr. Smith, but in the work of Messrs. Louis N. Crawford, E. Keith Lockard, Russell Ray, Harold E. Burket and the firm of Soule, Murphy and Hastings.

The Santa Barbara Chapter of the American Institute of Architects is but a year old and this is the first architectural exhibition to be given by its members. In celebration of the fact a combined meeting of the Santa Barbara and Southern California Chapters was held July 15th with a large attendance.

CLAY N. BURRELL BUSY

Clay N. Burrell, American Building, Oakland, has recently completed drawings for a three story brick veneer apartment building at Orange and Pearl Streets, Oakland, for F. Newton, to cost $60,000; a two story frame store and apartment building in Albany, for Harry Brown; a three story steel brick veneer apartment house on Erie Street, near Mandana Boulevard for Mrs. Louise Brain and an apartment hotel in the Lake district, the latter to cost $150,000.

COMPLETING THEATER PLANS

G. A. Lansburgh of San Francisco, is completing working drawings for a three story Class A store and theater building, designed for twelve stories, to be built on Broadway, Oakland, for Warner Brothers. The auditorium will seat 3500 and the estimated cost of the improvements is $1,000,000.

MUNICIPAL LIGHT BUILDING

Bennett & Haskell of Pasadena, are preparing plans for a one story reinforced concrete municipal light building for the Rose City to cost $150,000.

WILL STUDY MODERNISM

Eight European nations will be visited by students of the School of Architecture of the University of Southern California who are on the annual "vagabond" summer tour sponsored by the Trojan institution, according to the itinerary recently announced. The trip will be conducted under the direction of Dean Arthur C. Weatherhead and Prof. C. Raimond Johnson of the S. C. architecture faculty.

The latest trend in modern architecture will be studied by the mobile students in various cities and countries, emphasis being placed on American work as contrasted with that of other nations.

Important points of interest in the Trojan itinerary include Paris, Versailles, Madrid, Seville, Rome, St. Gothard, Heidelberg, Brussels, The Hague, and London. Washington, D. C. and other eastern cities will be visited on the return journey.

Foreign schools visited are the Paris Beaux-Arts, the Fontainebleau summer school, and the American Academy in Rome.

The "class" left Los Angeles for New York June 8th to board the Holland American S. S. for New Amsterdam. They will return to Los Angeles about August 15.

In addition to S. C. students the group included some architects and draftsmen not interested in making the trip for college credit.

SPRINKLER ORDINANCE

An ordinance proposing installation of meters for roof sprinkler systems where more than ten sprinkler heads are used, has been submitted to the Sacramento city council by Jas. S. Dean, city manager, and former Sacramento architect.

In addition to requiring the installation of meters, the sprinkler ordinance would require a permit before such sprinkling systems could be installed. Dean stated this would enable the city inspectors to keep a closer check on roof sprinklers. At present there are 102 such systems in the city and the only means the water inspectors have of learning of new installations is by observation. The proposed ordinance provides for a flat rate of so much per sprinkler head where less than ten heads are installed.

NO LICENSE—NO PERMIT

The Santa Ana city council has issued orders to municipal building inspectors to deny building permits to contractors who cannot exhibit a state license. It is proposed to secure the co-operation of other municipalities in Orange County to enforce the state law.

L. L. Dougan, architect, of Portland, reports that building construction is showing more activity in the Northwest than in any other section of the country. Mr. Dougan recently returned from an extended eastern trip.

Paul Thiry, architect, of Seattle, has established an office at 565 Skinner Building, Seattle.

H. C. Whitehouse of Whitehouse & Price, Spokane, recently returned from a trip of several weeks throughout the East.

Three former associate members of Washington Chapter, A. I. A., have been elected to active membership. They are Nelson J. Morrison, William J. Bain and Arnold R. Southwell.

Andrew Willatsen, architect, has moved to 803 Alaska Building, Seattle. Sharing the newly finished quarters are J. R. Nevins, architect-builder, and Theodore B. Carroll, draftsman for Mr. Willatsen. This group formerly had offices in the Lumber Exchange Building.

Leon C. Brockway, architect, has moved from 402 Security Building to 696 E. Colorado Street, Pasadena.

Ray G. Herold of San Jose recently returned from four years of study and travel in Europe. He will shortly establish offices in the San Francisco Bay region for the practice of architecture.

Harry Kirkman, architect, has moved from 302 Kenmore Ave., Los Angeles, to 1371 El Sereno, Pasadena.

Guy Lynn Rosebrook, architect, formerly of Oakland, has removed to 701 Walnut Street, Roselle Park, New Jersey.

John H. Powers and John H. Ahnden, associate architects, announce the removal of their offices from the Santa Fe Building to 26 O'Farrell Street, near Market Street, San Francisco. The new phone number is KE arny 3719.

John I. Easterly has moved from 2137 Tiffin Road, Oakland, to 824-37th Street, that city.

E. Field, architect, has moved to 789-36th Street from American Bank Building, Oakland.

REDWOOD CITY APARTMENTS

Mark E. Ryan is the owner of a three story Class B apartment building to be erected at Swane and Wipple Road, Redwood City, at a cost of $90,000. There will be twenty-four two and three room apartments. The plans were drawn by Carl Schuetz of Redwood City.

MUST PAY MUNICIPAL TAX

Orinance 8788, recently adopted by the San Francisco Board of Supervisors, imposes a license tax on architects as well as on engineers—civil, electrical or mechanical. Landscape gardeners are also included.

For any firm or individual engaged in such lines of business where the annual gross receipts amount to less than $3,000, the tax will be $3 per quarter; $3,000 and less than $5,000, $4.50 per quarter; $5,000 and less than $7,500, $6 per quarter; $7,500 and less than $10,000, $7.50 per quarter; $10,000 and less than $15,000, $11.25 per quarter; $15,000 and less than $20,000, $15 per quarter; $20,000 and less than $25,00, $18.75 per quarter; $25,000 and less than $30,000, $22.50 per quarter; $30,000 and less than $40,000, $30 per quarter; $40,000 and less than $50,000, $37.50 per quarter; $50,000 and less than $60,000, $45 per quarter; $60,000 and less than $70,000, $52.50 per quarter; $70,000 and less than $80,000, $60 per quarter; $80,000 and less than $90,000, $67.50 per quarter; $90,000 and less than $100,000, $75 per quarter; $100,000 and less than $150,000, $112.50 per quarter; $150,000 and over, $125 per quarter.

CIVIC CENTER BUILDING

Changes in the architecture of the War Memorial buildings in the San Francisco Civic Center, have been found necessary in order to bring the cost of their construction within the available funds.

In announcing the modification of the plans, President Kenneth R. Kingsbury said the revised plans would not materially affect the size of the buildings or their beauty. The new plans, he added, will be ready for bids in six months.

Architects will revise the plans with the object of making both the veterans' building and the opera house identical in size and design.

It is expected that eighteen months will be required to complete the buildings.

ENGINEER LOSES CASE

Structural engineers of New York who contested the validity of the provision in the mutiple dwellings act of that state, requiring that all plans must be filed by the owner in person or by a registered architect, in a suit filed by Oscar Goldschlag, lost their case in the New York Court of Appeals. Goldschlag, who is a professional engineer, claimed rejection of plans filed by him with the tenement house commissioner was an invasion of his constitutional rights. The court dismissed his petition without handing down a written opinion.

FORD PLANT AT RICHMOND

The Ford assembling plant at Richmond, California, will be erected without further delay, a contract for the construction of the dock and factory having been awarded the past month to the Clinton Construction Company of San Francisco, which company built the Ford plant at Long Beach. The Richmond improvements will cost about $3,500,000 and will be completed in ten months.

The plant will have a capacity of 400 cars daily. It will be located on the Richmond inner harbor, alongside a 500-foot concrete dock.

It will be made accessible to steamships owned by Ford, which will transport parts for cars from the Ford branch at Chester, Pa. Adjacent to the plant will be Santa Fe and Southern Pacific Railroad tracks.

In the modern style architecture, the unit will comprise an assembly building, 950 feet long by 320 feet wide, with a second story addition, measuring 950x160 feet; a boiler house, 55x80 feet; and an oil house, 63x113 feet, for housing the tanks containing various liquids required in the manufacturing and assembling of cars.

A craneway building, 400x100 feet, will parallel the concrete dock.

A lobby and large display room will be situated on the first floor. Just above, general and executive offices will be quartered. Complete first-aid facilities, including an emergency first-aid room, operating, rest, examination, waiting rooms and physicians' offices will be provided.

Daylight working conditions will be approximated throughout the entire plant by the use of roof monitors so constructed that light will be admitted without sun glare.

THE ARCHITECT

Thou that thru the year's swift flight,
Led by soaring vision's light,
Conquering earth, sky and main,
Buildest toil's enduring fame,
Ever lifting man's desire
To the pure, celestial fire,
Thou, O Architect, shall see
In thy work Divinity. —Ex.

ABOLISH THE TOLL BRIDGE

Seattle Chamber of Commerce trustees have gone on record in favor of keeping state highways free from toll bridges, and specifically urged purchase by the state of the Pasco-Kennewick bridge over the Columbia River, "if obtainable at a fair and reasonable price."

FAVORS LOCAL ARCHITECTS

(From the *Seattle Post Intelligencer*)

We have architects of national repute. They know the climate and other physical elements which ought to be given consideration in such plans. They know the best materials for meeting local conditions.

By choosing from among local architects the government would expedite execution of its building program, secure plans carefully worked out in conformity with local conditions, and bring about a wider distribution of funds, which is one of the important ends sought by President Hoover.

Money should be provided for payment of private architects. And so far as possible, this money should be spent with architects in or near the cities in which buildings are to be erected. This principle has been recognized in the case of the new federal courthouse to be built in Portland, Oregon, where a Portland architect has been chosen by the treasury department to draw the plans. It should be followed in Seattle in the case of the marine hospital, when authorized, and any other projects which the government authorizes here.

SALES SHOW 81% INCREASE

Sales of Steeltex lath, a building material manufactured by the National Steel Fabric Company, a division of the Pittsburgh Steel Company, Pittsburgh, Pennsylvania, show an increase of 81 per cent for the fiscal year ending July first, 1930, over the previous 12 month corresponding period, according to W. H. Shaffer, Jr., Dealer Sales Manager of the National Steel Fabric Company.

"This is a gratifying sales result in view of the general recession in building construction contracts," said Mr. Shaffer. "We attribute this sales increase to a consistent, follow-through sales and advertising policy which was carried out at a time when the natural tendency was toward curtailment due to the affected market.

"The resources and buying power of this country are too extensive to cause any staving off of business for long. Those who work harder and longer, and back up their merchandise to satisfy their trade in every way will generally find a lucrative market for their goods and will find it comparatively easy to maintain a steady and profitable increase in their sales," concluded Mr. Shaffer.

FILM EXCHANGE

Craft Films, Inc., will spend $1,000,000 on a new laboratory building on Santa Monica Boulevard, Los Angeles.

ARCHITECTURAL WOOD CARVING

Rudolph T. Schwartz announces that he is prepared to do special architectural wood carving for architects whose clients are interested in fine interiors and furniture. Mr. Schwartz, whose studio is at 411 Tenth Street, San Franciso, has executed wood carving for a number of prominent California architects, including Louis P. Hobart, John Galen Howard and Weeks and Day, all of San Francisco. Mr. Schwartz did some exceptionally fine carving in the Supreme Court and State Library Building, Sacramento, and in the residence of H. T. Knight at Montecito, Myron Hunt, architect; the residence of Charles Voldt, Santa Barbara, Soule, Murphy and Hastings, architects, and the residence of W. O. Jenkins of Los Angeles, T. Beverly Keim, architect. Mr. Schwartz also executed some of the interior wood carving in the Students' Union Building, University of California, Berkeley; the Mission Dolores and the St. Francis Church, San Francisco.

SPEND MORE AND SEE WHAT HAPPENS

(From the *San Francisco Chronicle*)

Merle Thorpe puts it very neatly when he says if everyone in the country had spent only one dollar a week more last January the Nation would have swung back to its peak of prosperity.

No more than that would have been needed. In a Nation full of resources and with plenty of goods on hand all that is needed now or any other time to make it prosperous is for the people to feel prosperous and loosen up accordingly.

When President Wilson said, "The present business depression is only psychological," he was laughed at, but he spoke the truth.

The state of business is a state of mind. Timidity scares prosperity away; boldness brings it to the front on the run.

If everyone will spend a little more everyone will quickly have more to spend.

HAZARD

Hazard Insulated Wire Works, Division of the Okonite Company, has a new handbook out in which is shown some of the work of leading members of the architectural profession. The author comments that "it is significant that so many outstanding buildings of permanent character are wired with Hazard electric building wire."

ADDITION TO COMMUNITY CENTER

Plans have been completed by W. E. Schirmer of Oakland for an addition to the Jewish Community Center, 14th Street, Oakland.

COMMISSION SELECTS LOCATION FOR SAN FRANCISCO-OAKLAND BAY BRIDGE

THE Hoover-Young Bay Bridge Commission has selected a location for the San Francisco to Oakland Bay Bridge, all other propositions having been eliminated. The location favored by the Commission is that from Pier 22 to Goat island and thence to the Oakland shore via the Key Route mole. While the commission has not finally approved this location, it has selected it as the one most suitable.

The San Francisco Bay Bridge, proposed in tentative plans prepared by the engineers of the State Department of Public Works under the direction of C. E. Andrews, bridge engineer, will cost approximately $72,000,000. It will be a double-decked bridge, of sufficient width to provide six traffic lanes on the upper deck for automobile traffic, and six lanes on the lower deck for interurban tracks and heavy truck traffic.

The main feature will be the structure starting at pier 22, near the foot of Harrison Street. This will extend across the bay for a distance of 7600 feet to Goat island. It will be in four spans, each approximately 1700 feet long and will give 221 feet of clearance at low tide.

Three piers in the channel will be necessary, with anchorage piers at the land ends of the bridge. The piers are to be constructed on new principles, each being a group of four separate piers interlocked and some 200 feet square.

The clearance above the surface was satisfactory to the naval officers on the commission, it being shown that the tendency is not toward higher masts but the opposite.

The structure will cross about the center of Goat island at an elevation of 175 feet, the grade dropping slightly towards the east. East of Goat island will be a single span 750 feet long and 165 feet above the water. Then begins a long steel trestle carrying the bridge to the solid fill of the Key Route mole.

The grades at the approaches will be 3 per cent for the interurban tracks and 3½ per cent for the highway.

It is estimated that it will take between four and five years to build the bridge.

In planning for the future traffic across the bay, C. H. Purcell, State highway engineer, Lester Ready, consulting engineer for the State Department of Public Works, and others under the instructions of B. B. Meek, director of the department, made exhaustive studies of the growth of automobile and truck traffic in California and at other places where automobile traffic has shown exceptional growth. The experiences of such bridges as the Philadelphia-Camden structure across the Delaware river, the bridges across the Columbia river, and on the Mississippi river were given close study.

It is the opinion of the highway experts that the six lanes of traffic on each deck are ample to take care of the probable traffic at its peak period, for many years to come. By reason of the heavy percentage of traffic that moves one way at the peak periods, the lanes being under control may be so regulated that four or five may be devoted to the one-way traffic.

With 4,500,000 autos crossing the bay last year via the ferries, it is estimated that the bridge as planned can carry 12,000,000 to 15,000,000 autos a year.

The engineers gave particular consideration to the interurban passenger traffic. Tentative plans for approaches at the San Francisco end, utilizing Rincon Hill, were prepared by the engineers. They provide for a plaza entrance for foot passengers, with loops to carry trains along Mission Street to Sixth, along the Embarcadero and to the Third and Townsend station of the Southern Pacific.

The loops will serve a large portion of the central business district, as well as extend the service as far west as Sixth and Market and to the present passenger terminal of the steam railroads.

Fixing the East Bay terminal on the Key Route mole will make it possible for both the Southern Pacific and the Key Route interurban trains to use the bridge with a minimum of construction.

IMPROVED HEATING SYSTEM

The Warren Webster Company has published a brochure descriptive of the Improved Webster type "R" system of steam heating. The Improved type "R" system is fundamentally the same perfected system with which architects are familiar, but with the addition of a specially selected standard metering orifice in each radiator valve, a system designed specifically for the requirements of large, high grade buildings.

SOCIETY and CLUB MEETINGS

LOS ANGELES CHAPTER

Southern California Chapter, A. I. A., honored the late George Washington Smith, architect of Santa Barbara, at its regular July meeting held jointly with the Santa Barbara Chapter of the Institute. Henry Eichheim, musical composer of Santa Barbara, was the guest of honor and spoke in appreciation of the achievements of Mr. Smith, with whom he had been intimately acquainted during the past thirty-five years.

The business portion of the meeting was brief and consisted principally of a report from Myron Hunt, secretary of the Professional Standards Committee, on the preparation of documents for use in connection with the work of the State Board of Architectural Examiners.

President H. C. Chambers announced that the August meeting will be held on the Harold Lloyd estate in Beverly Hills.

The following Santa Barbara members and guests attended the meeting: Harold E. Burket, Louis N. Crawford, J. F. Murphy, Russell Ray, Winsor Soule, Leonard A. Cooke, Henry W. Howell and Henry Eichheim.

Local members and guests present were: William M. McCay, Myron Hunt, Roy C. Mitchell, R. D. MacPherson, Harold G. Spielman, John J. Backus, Henry F. Withey, Robert H. Orr, Arthur R. Hutchason, Heth Wharton, Joseph Kaiser, Sumner M. Spaulding, Frederic M. Ashley, William M. Clarke, G. B. Brigham, Jr., Julian E. Garnsey, William H. Kraemer, Dwight Gibbs, H. Roy Kelley, Leslie H. Lippiatt, David J. Witmer, Mark Daniels, G. Stanley Wilson, Robert M. Shipley, H. C. Chambers, A. S. Nibecker, Jr., and Ralph C. Flewelling.

OREGON CHAPTER, A. I. A.

At the May 20th Oregon Chapter meeting, President Johnson presiding, the Small House Service Bureau problem was discussed and Mr. Doty requested a committee to work with him. President Johnson appointed Messrs. Jacobberger and Newbeury to frame a suitable resolution.

Mr. Bean, in charge of the golf tournament arrangements, announced that he had appointed Aandahl, Crowell, Johnston and Stanton a committee to secure prizes for the winners of the tournament. The sentiment of those present was that the sky was the limit as far as the number and size of the prizes was concerned.

Mr. Doty, Chairman of the Small House Service Bureau Committee, submitted the following resolution:

"WHEREAS, the Oregon Chapter of the American Institute of Architects is in accord with the Committee reporting against the Institute's connection and activity in the Small House Service Bureau, Inc., and

"WHEREAS, this Chapter feels that the work of this Bureau is detrimental rather than helpful to the profession, therefore be it

"RESOLVED, that this, the Oregon Chapter of the American Institute of Architects, goes on record as being opposed to the present connection of the Institute with the Small House Service Bureau, Inc., and be it further

"RESOLVED, that a copy of this resolution, together with the report of the committee, be forwarded to the Board of Directors of the Institute petitioning them to take action in this matter similar to that of the Oregon Chapter."

* * *

The June 17th meeting was attended by Messrs. Johnson, Stanton, Hinson, Lawrence, Allyn, Crowell, Jacobberger, Doty, Smith, Holford, Johnston, Marsh, Hemenway, Tucker, Parker, Newbeury, Roehr, Wallwork, Bean, Church and Aandahl.

For some time the executive committee has been considering the desirability of having photographs made of a number of the earlier buildings of Oregon, having both architectural and historical merit, for a permanent record. A letter was received recently from the Congressional Library in Washington, D. C. with the information that a photograph collection of American Architecture had been started and that it was their desire to make this an all-inclusive collection from all sections of the country from its origin up to the present time, and asking for contributions. The members expressed much interest in this proposal.

Ellis F. Lawrence gave a very interesting report of the annual convention to which he was a delegate.

As mentioned in the minutes of the last regular meeting a resolution about the Small House Service Bureau, Inc., was to be brought before the meeting for a vote. The resolution and a report from the Committee (Doty, Ch. and Jacobberger) was read.

Much discussion pro and con took place but as no agreement could be reached the resolution was tabled and the executive committee instructed to write the Institute Board of Directors asking if they would inform the Chapter in a general way about the Institute's connection with the Small House Service Bureau and its reason for giving the Bureau its support. The general concensus of opinion was that the Institute's connection with the Bureau is illogical.

The Whidden & Lewis tablet committee reported (by Tucker) that so far as could be determined, the cost of this tablet would exceed $100. The matter was referred to the executive committee.

Mr. Crowell, Chairman of the committee on Professional Practice and Competitions, presented a very complete and definite report on the Chapter's activities in regard to the Champoeg Memorial. He had been in correspondence with the Institute Directors who had written that the Institute was not in sympathy with the idea of work being done by groups of architects.

Because of this attitude the committee in their report advised the Chapter to give up the idea of trying to have the Chapter as a whole employed as architects for this project. The meeting would not accept this report without further investigation and as there will be no regular meeting until September, the matter was put in the hands of the executive committee for their decision.

Mrs. H. C. Wortman, Honorary Member of the Institute, has expressed willingness to be a delegate from the Chapter to the International Congress of Architects in Budapest this year. The Chapter has endorsed this appointment and the secretary has written to the Institute for credentials.

President Johnson announced the appointment of Messrs. Whitehouse (Chairman); Lawrence and Johnston as a committee on City and Regional Planning.—Fred Aandahl.

WASHINGTON STATE CHAPTER

A special luncheon meeting of the Washington State Chapter was held at the College Club, Seattle, June 12, complying with a By-law of the Chapter requiring a meeting to be held in response to a properly signed petition for the consideration of specific business.

The specific business was as follows:

1. Some action by the Chapter concerning the proposed running of an arterial street through Woodland Park, Seattle.

2. Some action by the Chapter concerning the approach to the proposed Mercer Island Bridge through Seward Park, Seattle.

3. A resolution to the State Board of Examiners in Architecture concerning a recent method of licensing in architecture by oral examination.

The meeting was called to order by Vice-President Holmes after the luncheon and a resolution presented by Mr. Allen expressing the Chapter's disapproval of the present plans for a bridge to Mercer Island and approach through Seward Park, now before the City Council, and providing that copies of the resolution be sent to the City Council and newspapers of the city.

After the motion had been duly seconded a substitute motion was made referring this matter, and also the approach to the Aurora Avenue Bridge through Woodland Park, to the City Planning Committee of the Chapter for study and report at the next regular Chapter meeting. This motion was carried.

It was also voted that the Chapter recommend to the City Council that the question of the approaches to the Aurora Avenue Bridge, through Woodland Park and to the Mercer Island Bridge through Seward Park, be referred to the City Planning Commission.

The licensing in architecture by oral examination was then taken up and it was voted that the Chapter express its opposition to the present methods of conducting these oral examinations for the state registration of architects, and that the question of how the situation could be improved be referred to a committee to report back to the Chapter. The chair referred this to the Legislative Committee.

TACOMA ARCHITECTS' MEETING

Washington State architects and their wives and guests held an enjoyable gathering June 21st at Tacoma. Among the guests were the President of the Washington State Society of Architects and a formidable number of draughtsmen and architectural students, whose presence was due to the fine efforts of Mr. Gove and his committee.

Nelson Morrison of Tacoma was chairman of the entertainment committee.

The caravan visited Gravelly Lake, where all found their way to "Belleterre," the splendid home of Mr. and Mrs. David C. Scott, which was designed by Edwin J. Ivey of Seattle. The house, the charm of setting among the trees, and the intimate vista out over the little lake, appealed to all. Lister Holmes sat spellbound listening to the slow dripping of water into the quiet pool.

"Waloma," the residence of Mr. and Mrs. Alexander Baillie, was next. This house has a dramatic

setting at the edge of the larger American Lake. Here the party was greeted by the jovial host and talented hostess, into a house which not only reflects the dream of the original designer, Kirtland Cutter, but the taste and imagination of Mrs. Baillie. Mediterranean, this house; its terrace, water approach and surroundings have been so cleverly handled that it seems not in the least exotic.

Last, but not least of the houses visited, was the largest of the three, "Villa Carman," Italian in inspiration, the residence of Mr. and Mrs. J. L. Carman. Its fine living room, well-ordered spaciousness and well executed formal gardens were worth study.

Good monuments are scarce in the Northwest, and it was a treat for all to visit the monument to the 91st Division recently completed at Fort Lewis and built by the generosity of Frank McDermott. Alvard Fairbanks was the sculptor for the bronze group and John Graham of Seattle the architect for the monument.

Shortly after six the party journeyed to the Tacoma Golf and Country Club where an excellent dinner was enjoyed.

At the conclusion of the dinner the 352nd regular meeting of the Chapter was called to order by President Borhek. Nelson Morrison welcomed the guests and members from other cities outside Tacoma on behalf of the Tacoma members. C.H.A.

SECTION ON ARCHITECTURE, C. C.

Regular meeting of the Section on Architecture, Commonwealth Club of California was held July 3. Ten members were present.

Mr. Morrow: Why must so much of public activity be done in such bad taste? The canopy over the civic auditorium has been recently repainted, and in such bad taste that it is pathological. It is so bad that I would be ashamed to take a stranger of taste to the symphony.

It was suggested that such matters will come before the proposed Fine Arts Commission, when and if, it is organized.

Mr. Hewetson emphasized the help in matters of civic art that architects might render, mentioning the fact that John Austin, architect, is president of the Los Angeles Chamber of Commerce.

Mr. Dixon: Los Angeles knows dollars and cents value of art.

Mr. Knight: Sacramento has for its city manager, James S. Dean, architect.

On suggestion of Mr. Walcott, moved by Mr. Dixon, seconded by Mr. Elder and carried, it was resolved that the Chairman of the Section should write a letter to Supervisor Hayden, Chairman of the Auditorium Committee of the Board of Supervisors telling him of the criticism of the repainting of the canopy and asking him to speak to the Section on the subject and explain the circumstances of the execution of the work and suggesting that the Section would be glad to co-operate with his committee or any other public authority having matters of taste to decide.

Mr. Knight suggested that the minutes of the City Planning Section be sent to the members of the Architectural Section who are not also members of the City Planning Section. This will be arranged.

The next meeting was set for August 21st.

—M.M.W.

SAN FRANCISCO ARCHITECTURAL CLUB

Along about this time of the year minds wander to the open road, the forests and streams and the offices and clubs must suffer to a certain extent. However, vacations are fleeting and we must buckle down to work.

New Quarters

The San Francisco Architectural Club has a huge program outlined for the remainder of the year, including a change of quarters. Only those who attend all the club's functions know what a real, whole hearted fellowship exists among its members. Letters are received from former members all over the United States, and even from Europe, showing that the club is not forgotten.

The Atelier

The backbone of the club, of course, is the Atelier, where the boys study architectural design and it is hoped we may succeed in building it up as much as possible, especially since the Beaux Arts Institute has made it easier to get a diploma. This should inspire the members to harder work. All new members or eligibles to the Atelier will be welcomed.

Engineering Class

It looks as though the engineering class will start a new course this term due to the new requirements of the State Board of Architecture. The last two classes under the direction of C. J. Sly have been most successful. Those interested should inquire at once as the class will more than likely begin in August and it is difficult to catch up after the class has started.

At the engineering class dinner, at which there were

nearly thirty members present, Mr. Sly was presented with a beautiful pen and pencil set. In passing the set around the table for the members to inspect, an old pen and pencil were substituted, much to the amusement of everyone. Of course the good ones were returned.

Equisse

In regard to the "Equisse", the club bulletin, which the members missed during July, after a year and a half of uninterrupted service, it may be said that it is not to be discontinued, but that due to the contract on the advertisements expiring with the June issue, it was deemed advisable to suspend publication in July and possibly in August, to allow time to renew contracts and start off again with the September number. The club is offering two prizes for a new cover design to be judged at the August meeting, so let's show the right spirit and submit one. The size is 6⅛x9⅛ inches. A simple design with the name, "The Equisse" and "San Francisco Architectural Club," with a place for a renewable center piece and date line are wanted. The club emblem may also be used.

Meetings

At the July meeting, S. C. Leonhauser was elected treasurer and W. E. Mooney and C. J. Sly were named directors. Ray Woodward and Carl W. Kaub were elected to membership. Wednesday, August 6th, the Club held a well attended meeting. An exhibition and refreshments were the features.—I. S.

A RADIO CITY

New York is to have a "Radio City." Not one building, but a group covering three blocks in the center of its business life.

Four large theaters are to be devoted to variety entertainment, sound motion-pictures, musical comedy, and dramatic productions. Perhaps a symphony hall!

The Metropolitan Opera declined to queen it over this stupendous project of the Rockefeller interests; and the investment of $250,000,000 will express the amusement activities of the common people.

So far as the information that is provided to the press by representatives of the Rockefeller interests goes, this is what New York is about to see, says *The Literary Digest.*

"Fronting Fifth Avenue and forming the central structure on that side will be an oval building of moderate height. On the first floor there will be shops. The second will be occupied by a large bank, and on the roof a restaurant will be built, with an outdoor promenade running around the entire building.

"The oval building will extend to a garden plaza that will cut through the development and run parallel with Fifth Avenue, from Forty-eighth to Fifty-first Streets, according to the statement.

" 'No effort will be spared,' says the statement, 'to make the plaza, the width of which will be almost as great as the length of the average city block, the most impressive boulevard of its kind in the world. Fountains, statuary, and beautiful garden plots will intersperse the whole extent of the plaza.'

"There will be huge underground bus terminals and parking space will be provided as well as subterranean boulevards for automobile traffic. All deliveries in the radio city will be effected underground, thus reducing to a minimum the traffic problem in that area.

"A development of this character, which would at once create an architectural unit that would typify American progress in city planning and provide a center for the radiation of the best of entertainment and of musical culture, has long been the dream of those connected with the project."

National Broadcasting will be one of the structure's most active tenants, operating twenty-seven studios, relaying the productions of four theaters by television or radio, and otherwise providing the principal link between the fount and the millions who are to drink from it.

The local audiences who attend the performances will help to defray the cost of presenting the entertainment to the nation at large, and the public will thus be spared listening in to an over abundant program of advertising.

D. ZELINSKY & SONS BUSY

D. Zelinsky & Sons, Inc., of San Francisco, have been awarded the contract of painting, lacquering and decorating the Pacific National Bank Building, Montgomery and California Streets, San Francisco. O'Brien Bros. & W. D. Peugh, are the architects. The work was awarded without competition. The products of San Francisco manufacturers will be used in the painting and lacquering of this building.

D. Zelinsky & Sons have also been awarded the painting contract in the Aptos School, MacDonald & Kahn, contractors, the Mother House for the Dominican Convent at Mission San Jose, S. Rasori, contractor; apartments at Lake and 25th Avenue by L. B. Ham; apartments at Scott and Marina Boulevard by Ben Liebman, and the twenty-three story Bellaire Apartments at Green & Leavenworth Streets, all in San Francisco.

STRAUS' SUMMARY OF BUILDING

Prospective building throughout the United States during the first half of 1930, as revealed in official reports of building permits issued in 578 principal cities and towns, fell perceptibly behind the volume for the first six months of 1929, according to S. W. Straus & Co. For the first half of 1930, the volume of permits was $1,039,037,914, a decrease of 49% from the same period last year, when the figures were $2,036,334,562. June, 1930, showed a loss of 33% from June, 1929. Permits for June, 1930, totaled $180,066,975 against $202,231,771 in May—a loss of 11%.

Throughout the country generally sounder conditions for improved real estate are steadily developing. Surpluses of building space which may exist in one type of housing or another in localities here and there are being steadily absorbed through the present let-up in building activities.

With this gradual trend toward well-balanced conditions of supply and demand, the rental situation is, of course, improving in corresponding degree by reason of the removal of surplus space from the market. A better tone thus is being imparted to the entire real estate situation, particularly in the larger cities of the nation.

This does not mean necessarily that the present period of readjustment need be greatly prolonged. Following four years of very active building, the present cycle, in fact, began toward the end of 1925, since which time the trend of general building activities has been steadily downward.

As a further indication of the increasing stability of improved real estate conditions, it is to be noted that the Federal census reports now being announced reveal substantial population growths in the principal cities of the country. Increased population means increased demand for housing space of all kinds.

Let us take, for illustration, the census report covering New York City. This shows that during the ten-year period there was a growth of more than 1,342,000 in population. To assist one in trying to visualize this enormous gain, it might be stated that New York City, in order to fulfill its normal housing requirements during the last ten years, thus has had to construct another metropolis within its boundaries as large as the city of Detroit. Chicago within her boundaries has had to build another city larger than Washington or Milwaukee. And in all the other great cities of the country population growths have necessitated great construction projects, such as office buildings, hotels, apartment hotels and apartment houses.

The following is a list of a few of the largest cities of the country, together with the officially reported increases in population in each of these places for the past ten years: New York, 1,342,000; Chicago, 672,048; Detroit, 570,719; Los Angeles, 665,057; San Francisco, 119,298; Minneapolis, 82,029; Milwaukee, 111,815; Pittsburgh, 56,452; Baltimore, 56,095; St. Louis, 44,437; St. Paul, 36,185; Cleveland, 105,001; Cincinnati, 48,084; Buffalo, 66,138; Washington, 48,145.

Unemployment in the building trades for the month of June showed no improvement over the month of May, as reported by the American Federation of Labor. Thirty-seven percent of the 850,000 building trades members of the American Federation of Labor were unemployed in the months of May and June.

The following twelve states are listed by Straus as leaders in building construction for the first six months of 1930:

	No. of Places	*Volume of Permits For First Half, 1930*
1. New York	46	$253,005,327
2. California	66	105,679,933
3. Ohio	27	69,334,238
4. Pennsylvania	30	64,584,820
5. Illinois	52	62,878,555
6. Michigan	22	46,497,730
7. Massachusetts	30	40,111,514
8. New Jersey	36	40,061,846
9. Texas	21	35,615,199
10. Wisconsin	20	30,610,975
11. Washington	14	25,091,423
12. Connecticut	19	22,825,219

PROMOTED

William Stringham, assistant general superintendent of the East Works plant of The American Rolling Mill Company, of Middletown, Ohio, since 1923, has been made assistant vice president of the company.

Mr. Stringham joined the Armco organization February 18, 1901, as a roller in the Central Works plant in Middletown. He continued as a roller until January 1, 1912, when he was made assistant superintendent of the sheet and jobbing mill. On June 1, 1922, Mr. Stringham was made superintendent of the sheet and jobbing mill departments, and on February 1, 1923 he was made assistant general superintendent of East Works. At the present time he is in charge of all the rolling and finishing operations in that plant.

ARCHITECT WRITES LETTERS

A Chicago architect, Homer Harper, believes in writing educational letters to prospective clients. He has sent copies to some of the architectural press (including the *Bulletin* of the Illinois Society of Architects) and volunteers the information that he plans to send these epistles at monthly intervals to prospective clients until "I either get lots of business or perish at the hands of some of the serious minded morons who are afflicted with the superiority simplex."

Letter No. 1—Remodelling

Dear Sir:

The practice of architecture in a community of this size is about as hazardous and exhilarating as looping the loop in a wheelbarrow, because of the residence and remodelling work that falls to the lot of the local architect.

A residence is a homing place—a nest—and the homing instinct is what inspires folks to build homes. Incidentally this homing instinct is the acme of selfishness which is as it should be. A biologist knows more about it than a psychologist and reason is not in it. Hence an ideal home is large, spacious and quite pretentious, all rooms facing the choicest view, and all rooms should have arches, book cases, closets, mirrors, fireplaces, and the best of materials throughout. As the design progresses it is found advisable to add a few more sleeping rooms, a bath or two, a breakfast nook, sun parlor and den. These ideas and requirements run about the same whether the client has five or twenty-five thousand to invest and the architect is expected to fudge the cost to suit the pocket book.

Remodelling work is the surgical branch of the building game. The architect is supposed to take a sick old building, low in vitality and with fallen arches and rejuvenate it to the full gloom of health and vigor. While the architect is slashing away the nearest of kin, the owner is convulsed with fear and worry. Worry about the loss of blood (material) and fear about the cost. Great is the disappointment and dissatisfaction when an unavoidable scar is detectable and the owner cannot afford a necklace or corsage to conceal it. Someone is guilty and it must be the architect.

Neither residence nor remodelling work is remunerative to the architect and only in occasional instances does he realize a reasonable profit. The owners are eager, expectant and rarin' to go and the work takes time, attention and careful study. Occasionally an owner becomes hysterical and disrupts the whole program by hollering lustily for "Service." Time and money mean nothing to him as long as some one else is spending it. The result is that some one without a sense of humor takes him seriously and the building suffers from the rickets, poor circulation or eczema. This gives the owner something to talk about for the rest of his life.

But in the end, with only a few exceptions, reason prevails, the owner is pleased with his investment, and proud of his building.

I like it—I like it because there is a game to it. The game is to get the most and best in utility, durability and appearance for the money invested. Remember that this work puts the architect into intimate contact with all phases of the building business. All materials are carefully studied for adaptability and cost. It affords ample opportunity to study and judge the performance of the mechanics and laborers under all conditions and to discover new tricks of the trades.

Hence, when the opportunity comes to design new work, your local architect has all the pass words and hailing signs and can lead you through a building program with ease, economy and security that will surprise and please you.

All anxiety and fear are gone when the owner uses architectural service as it should be used. He can know all about the size, appearance, construction and cost before he spends a dime on actual construction.

Yours very truly,

HOMER HARPER.

Letter No. 2—Architectural Service

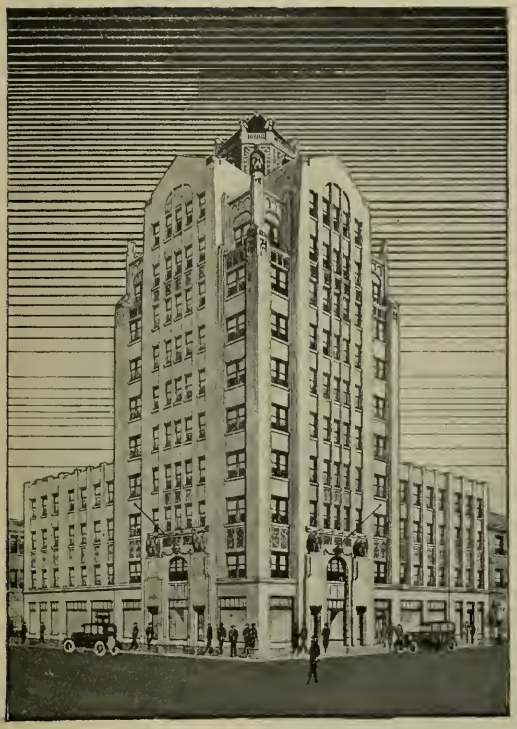
Dear Sir:

There are three momentous highlights in a man's life.—His first chew of tobacco, his wedding and his purchase of a plot of ground.

He tackles the delicious chew with pleasant anticipation, he approaches the nuptial ceremony with trepidation and faltering step. In neither case does he suspect what is in store for him.

But when he buys a lot he is all business. He shrewdly insists on surveys, abstracts, quit claims, records, deeds, etc.—all stamped, sealed, sworn, and duly delivered and all bound with a woolen string. These services are accomplished by surveyors, abstractors, lawyers, bankers and public officials all of whom know their business. There are fees to pay and the man pays them.

When a man builds a building on his lot there is no accounting for his behavior. Some go about it impetuously, sign contracts on the spur of the moment and suffer from that strange illness which follows a rancid deal. Some go about it fearfully, furtively and haltingly and have the bee put on them



THE BAKER COMMUNITY HOTEL, BAKER CITY, ORE.
Architects: Tourtellotte & Hummel, Portland, Oregon
General Contractor: John Almeter, Portland, Oregon
Roofing Contractors: Cook & Emele, Baker City, Oregon

Pioneer 10 Year Guaranteed Roofing

Chosen by Architects Tourtellotte & Hummel

IN the designing of the new Baker Community Hotel, Baker City, Oregon, Architects Tourtellotte and Hummel have wisely insured their client against costly maintenance and repair by writing "Pioneer 10 Year Guaranteed Roof" into their specifications.

Permanent roofing protection is made certain in selecting Pioneer 10 Year Guaranteed Roofing because you may rely upon these four things: the highest quality of materials... a proven method of construction... skilful application by authorized Pioneer roofing contractors... rigid semi-annual inspection by the Pioneer Engineering Department.

For more than forty years, the name Pioneer has been linked with every important advancement in roofing construction on the Pacific Coast. From this long experience in meeting Western roofing requirements has grown a wide knowledge which architects will find valuable in the solution of their individual roofing problems. Simply write or phone our nearest branch office, and a competent representative will call.

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Sutter 7571

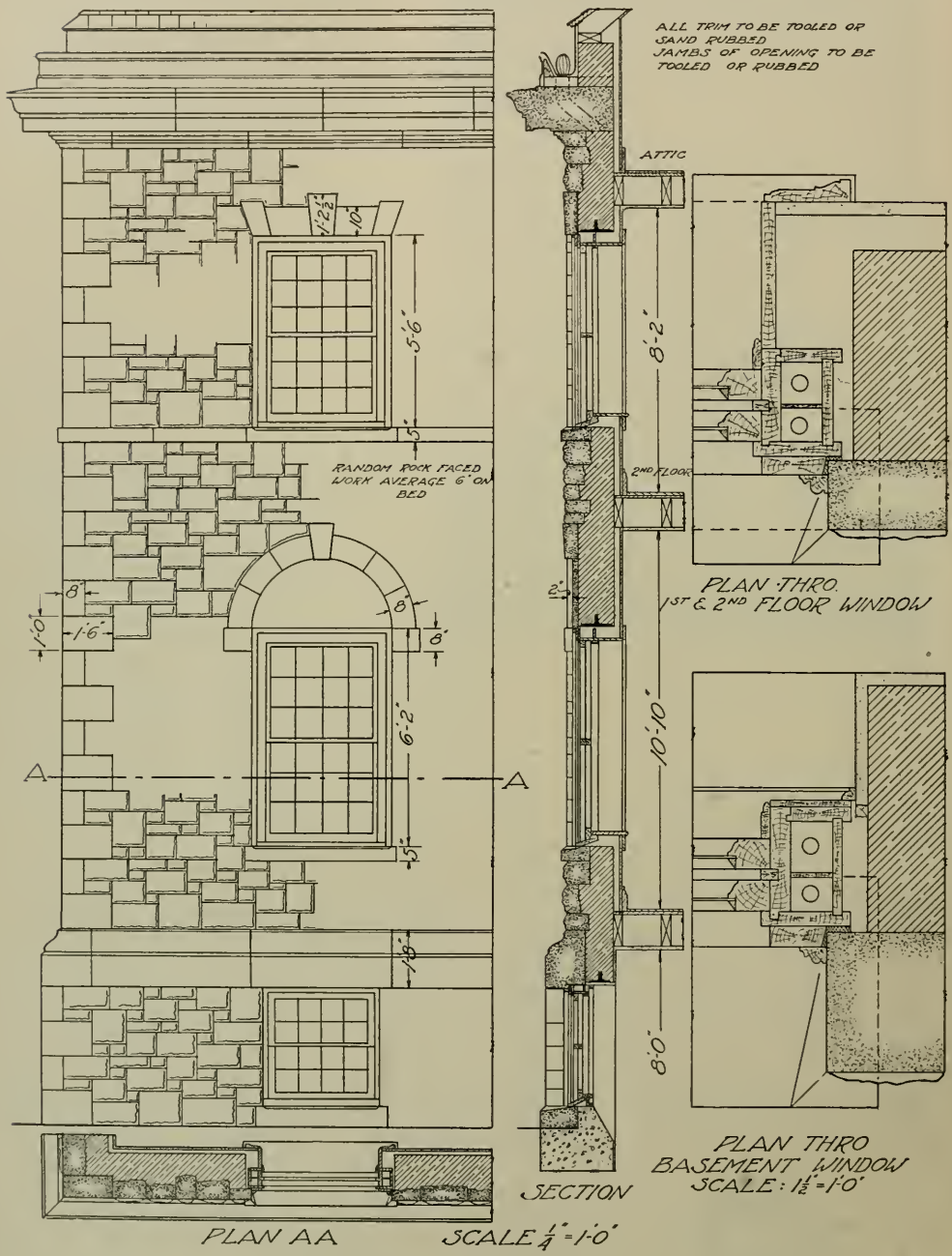
1217 Spalding Bldg.
PORTLAND, OREGON
Atwater 6525

859 Dexter Horton Bldg.
SEATTLE, WASH.
Main 5842

424 Symons Block
SPOKANE, WASH.
MAIN 5435

525 U. S. Nat. Bank Bldg.
DENVER, COLORADO
Keystone 7653

1117 Cont. Nat. Bank Bldg.
SALT LAKE CITY, UTAH
Wasatch 7954


EXTERIOR TRIM AND ROCK FACED WORK
ALL TRIM TO BE TOOLED OR SAND RUBBED
JAMBS OF OPENING TO BE TOOLED OR RUBBED
ATTIC
2ND FLOOR
RANDOM ROCK FACED WORK AVERAGE 6" ON BED
A
A
PLAN AA
SCALE 1/4" = 1'-0"
SECTION
PLAN THRO. 1ST & 2ND FLOOR WINDOW
PLAN THRO BASEMENT WINDOW
SCALE: 1 1/2" = 1'-0"

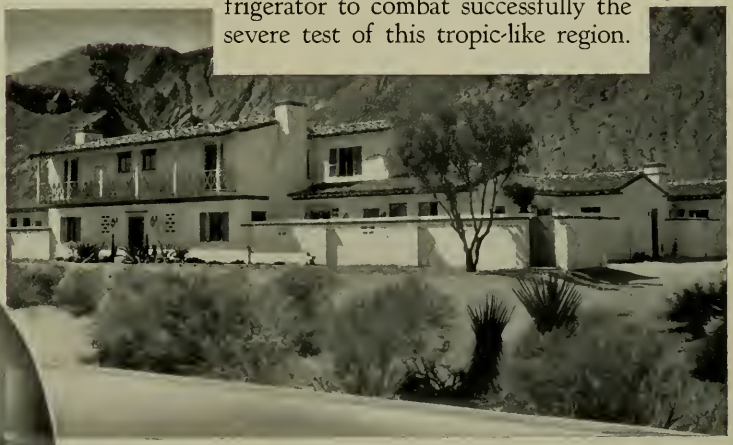
Courtesy Vermont Marble Company

DETAILS FOR MARBLE EXTERIOR TRIM

The Monitor Top *Challenges* Desert Heat

THERE'S a bit of the dramatic in the recent installation of General Electric refrigerators in the new El Encanto Apartments at Palm Springs. Far out in the desert country, where yesterday parched-tongued wayfarers struggled gasping through endless drifts of torrid sands, General Electric now makes of one-time searing heat no more than a poignant memory.

Marshall B. Wilkinson, El Encanto, builder and designer, wisely selected the General Electric Monitor Top refrigerator to combat successfully the severe test of this tropic-like region.



General Electric
REFRIGERATORS

The L.H. Bennett *Company,*
Northern California and Nevada Distributor
Rialto Building, San Francisco

The GEORGE BELSEY *Company*
Southern California Distributor
Architects Building, Los Angeles

by those in the building trades who watch their step and know how to watch the step of others. Small wonder that some buildings are hard to occupy, rent or sell, look like the devil, and cost plenty to start, more in changes and other unforeseen extras, and still more in upkeep and insurance.

Why not use the same good judgment and intelligent precautions in building a building as is used in the purchase of a lot which represents only a fraction of the cost of the building.

By the use of Architectural service *as it should be used* you can have a copy of the "DEED" to your building before a spade disturbs the soil on your lot. You can know all about size, materials used, how it will look, and the cost to the penny.

You will also know that the Architect's fee will be absorbed several times by the savings in the original cost, the upkeep and insurance. And it will look more like a real building than the wasp nest you might get.

I can safely say that there are less than ten people in Berrien County who thoroughly understand the purposes and uses of Architectural service. If you happen to be one of these I would enjoy hearing you tell about it because I like Architecture. If you are not I would like to tell you all about Architectural service because I know you will see the value of it.

Yours very truly,

HOMER HARPER.

OREGON STATE BOARD

All officers of the Oregon State Board of Architectural Examiners were re-elected at the annual meeting July 25. John Bennes, of the firm of Bennes & Herzog, was re-elected president; J. E. Wicks, Astoria, vice-president; and Morris H. Whitehouse, treasurer.

Ellis F. Lawrence, of Lawrence, Holford, Allyn & Bean, was elected to fill the director's place vacated by the death of Joseph Jacobberger. Frank Clark of Medford was the other director elected.

OCCUPYING NEW QUARTERS

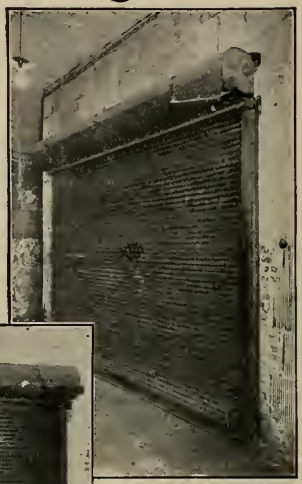
R. N. Nason & Co., manufacturer of paints and varnish, with offices at 151 Potrero Avenue, San Francisco, have recently had completed a six-story concrete factory on Utah Street, near 15th, containing 40,500 sq. ft. to take the place of the old plant. Modern equipment has been installed. The structure is being used for lacquer manufacture and storage of products. The new building contains 50% more floor space than the old building.

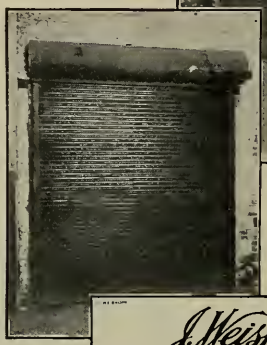
PORTLAND FEDERAL BUILDING

Portland architects have been advised by Ferry Heath, assistant secretary of the United States Treasury in charge of the public building program, that it will be impossible at this time to engage a Portland architect for that city's new federal building, for the reason that Congress has failed to appropriate sufficient funds.

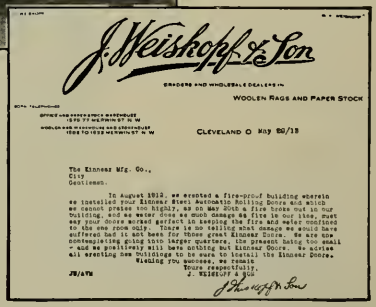
undamaged

—yet they stopped two serious fires!





Unretouched photographs, taken April 8th, 1930, of the Kinnear Automatic Rolling Doors installed in the Weiskopf Building in 1912, as they appear after eighteen years of continuous service and fire protection duty.



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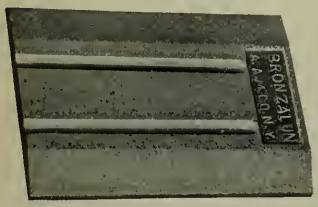

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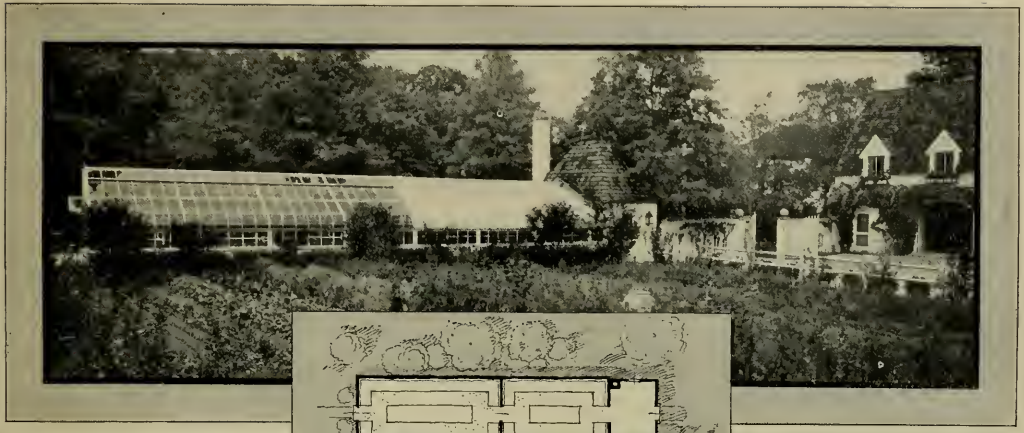

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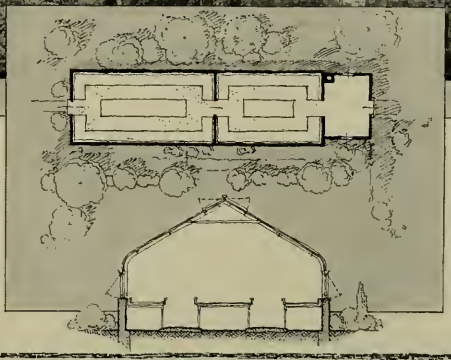

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BOOK REVIEWS

By Edgar N Kierulff

TRI-TRENT (A Wood Preservative) By Dr. James N. Lawrie (And Associate). Published for and by The E. L. Bruce Company, Memphis, Tenn. No price. A. I. A. File 19-A-J1-J4.

This book deals with a problem of the greatest importance in building—the treatment of wood, immunizing it against destructive agents. It is copiously illustrated, put out in paper covers and well printed. It becomes a technical report and as such is worthy of consideration by all members of the architectural profession and building trades.

NEW BUILDING ESTIMATORS' HANDBOOK (A Handbook for Architects, Builders, Contractors, Appraisers, Engineers, Superintendents and Draftsmen.) By William Arthur (15th ed. revised and enlarged.) Published by the Scientific Book Corporation, 15 East 26th Street, New York City.

Having reviewed other and earlier editions of this book, the reviewer can say little else than that the 15th edition is as fine a handbook on building estimating as has ever come to his attention. Clearly written, concise and with accurate tables and general information, it is a valuable asset to the estimators' desk.

HISTORY OF THE CAMPUS PLAN OF THE UNIVERSITY OF ILLINOIS, By Leon Deming Tilton, B. S., A. S. L. A., and Thomas Edward O'Donnell, M. S., M. Arch. Published by The University of Illinois Press. Price $5.00.

A book bound to prove of interest to the student and architect of university planning. There are fifteen well arranged chapters and a large number of photographed plans and building group details. There are three appendices A-B-C. "A" deals with a list of buildings with cost; "B"—Pertinent letters relating to problems of campus planning and development. "C" gives an extensive bibliography on the subject in question. Altogether the ensemble makes an excellent reference book and should be most acceptable to the architectural profession.

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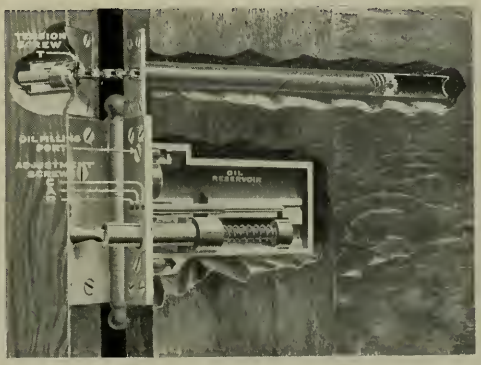

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BOSTON IS GOING MODERN

Boston is "going modern," Isidor Richmond, architect of that city, declares in a statement made public by the American Institute of Architects.

"It cannot be doubted that changes of great importance are taking place in the art and architecture of America, and Boston cannot but be affected," Mr. Richmond says. "We are perhaps at present too close to these changes to properly appraise them and judge of their worth. The perspective of time is necessary.

"Boston most assuredly is slowly but surely losing its Old World character, and it must make all who love Boston for its intimacy and its quaintness sad to see this change to modernism taking place, but we have every reason to hope and expect that in exchange we will get something that is even finer and better.

"The predominant general character of Boston, it must be admitted, is still, and proudly so, that of a quaint old Colonial town. It should be remembered, however, that we are celebrating the Ter-centenary this summer. Boston's present character is the result of three centuries of solid, slow, steady growth.

"Buildings like Faneuil Hall, the Old State House, the State House on Beacon Hill, the Old North Church and Old South Meeting House, the Park Street Church and the old houses on Beacon Hill—all these, together with such more recent gems as Richardson's fine Trinity Church in Copley Square and McKim, Mead & White's incomparable Public Library (even though these last two are not of Colonial architecture), are the buildings that give Boston its Old World character.

"In strong contrast to the modern trend is the architecture of the new Georgian buildings now being built for Harvard University, and the Boston College Gothic group, which seem to be determined to adhere to their original styles regardless of the trend of architecture outside their walls.

"While this trend towards modern architecture is undeniably taking place in the business section of Boston, a great number of buildings are being built in the outlying parts of the city which are following traditional lines. Buildings such as residences, churches

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and college buildings are being built in the Colonial, Tudor-Gothic and Gothic styles, but into a great number of these buildings there is creeping a distinctly modern note.

"The art of architecture, like all other arts, must be free to respond to man's developing needs and widening horizons. To cramp it by rigid adherence to the technique, or formulae of other times, or uncongenial dogmas, would be to stop up the springs of its inspiration.

"There has been much discussion, of late, regarding certain new tendencies in architectural design; and some animated questioning of their propriety. The new is ever startling and much tact is needed in appraising the unfamiliar. The present situation as regards architecture has been repeated many times.

"But, in all the great architecture of the past, however varied, we may discern analogies due to the inevitable response of the artist to the rhythm which underlies all true design. The history of our art is but a revelation of the fresh application of ancient principles, by succeeding generations of men, to forms expressive of their needs and their ideals. In the development of any art we cannot avoid change, for change is an attribute of life itself.

"But though forms may vary and systems suffer alteration, the fundamental principles of sound building, coherent composition, rational expression of function and true architectural harmony must persist. All affectation, whether it tends toward the consecration or the imitation of outworn motives, or strains toward the merely strange and unfamiliar, is false.

"The architecture of today must be tested by its adherence to the true principles of design, rather than by its likeness to the details of historical precedent. It is the spirit rather than the precise form which is of supreme importance."

ARCHITECTS DISCUSS CITY PLANNING

Members of the Washington Chapter, with others interested in city planning, attended a luncheon meeting at the Olympic Hotel, Seattle, July 2, under the auspices of the Pacific Northwest Association of Planning Commissions, to meet Horace L. Seymour, Direc-

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tor of Town Planning for the Province of Alberta. Mr. Seymour was returning home from the National Conference on City Planning recently held in Denver, Colorado.

At the conclusion of the luncheon, the chairman, General Robert Alexander, President of the Pacific Northwest Association of Planning Commissions, introduced Mr. Seymour, who spoke interestingly of his work in Alberta and of some observations on his recent trip through the western section of the United States going to and from the National Planning Conference in Denver. Speaking first of the idea of a central planning bureau as exemplified by his office in Alberta, Mr. Seymour said that his experience of a year and a half with Province-wide control had convinced him of its advantage. He urged, however, that this control be used in a co-operative and not in a prohibitive way. He believed that states should organize a somewhat similar organization. If state control was not practicable, he believed county control would be a very good substitute.

Of observations outside of Alberta, conditions in San Francisco were mentioned particularly in relation to traffic. A Citizens Committee on Traffic Problems has been formed and has made marked progress. There has been put into effect a sign control system and traffic has been channelized. There is no double parking in San Francisco. Curb space is marked in different colors designating the kind of parking and time limit allowed. Such a system, it was thought, might be advantageous for Seattle.

Other interesting remarks were made by others who were present. Mr. Goodwin, President of the Seattle Planning Commission, spoke of the difficulties under which the Seattle Commission had labored, without authority or funds, and thought that some provision for these should be provided by the city charter. Mr. Dial, speaking for the King County Regional Planning Commission, told of its aim to cooperate with the Seattle Commission and of the effort to have aerial photographs made as means of studying road locations. The Tacoma Planning Commission had been given an appropriation for aerial photographs of their territory extending to the King County line.

Mr. Shorett of the Seattle Planning Commission told of what the Bogue Plan of Seattle had accomplished and also the importance of an industrial survey which had been advocated by the Seattle Planning Commission.

Mr. Pardee of the King County Regional Planning Commission and Chairman of the Legislative Committee of the Pacific Northwest Association, spoke of efforts that had been made to get legislation from the state and of future plans being formulated for that purpose. Dr. Fisher, President of the Belling-

ham Zoning Commission, told of the efforts in that city to get a zoning ordinance, his Commission, at present, having a task on its hands to sell the zoning idea to the public.

FACTS FOR HOME BUYERS

The appointment of N. Max Dunning of Chicago, Illinois, Fellow of the American Institute of Architects, as chairman of a subcommittee to prepare a booklet which will acquaint prospective home buyers with the various points which should be considered in purchasing a house, is announced by Secretary of Commerce R. P. Lamont, who is chairman of the National Committee on Wood Utilization. The preparation of this booklet has been made one of the special projects of the National Committee on Wood Utilization.

"A better understanding on the part of the home-buying public in regard to the principal structural and architectural features of a house would give a decided impetus to home ownership," said Mr. Dunning, in commenting on the project for which his committee was organized. "The purchase of a home is the most important investment the average person undertakes. An understanding of materials and workmanship and of what constitutes good architecture, therefore, is of vital importance to him in safeguarding his investment. These factors and many others are to be studied in detail by the subcommittee, and the results of their findings incorporated in a bulletin under the title ' How to Judge a House.' "

The National Committee on Wood Utilization, which was organized by Herbert Hoover as Secretary of Commerce, has for its object the furthering of efficient wood-using practices. The preparation of the Committee's bulletin on "How to Judge a House" is a logical step in this direction. This publication will discuss the planning, designing and construction of houses costing less than $15,000 in connection with which wood is used as an important structural or finishing material.

ARCHITECTS ADDRESS MILLMEN

The annual meeting of the Millwork Institute of California was held at Hotel Huntington, Pasadena, August 6, 7 and 8.

Myron Hunt and John C. Austin of Los Angeles addressed the convention. Mr. Hunt told of the value of good workmanship in milled lumber and discussed the relation of the architect to the mill industry. Keith Bowelson of the Security-First National Bank of Los Angeles, research department, discussed credits.

Thursday, August 6, the annual meeting of the directors was held and general business of the Institute was transacted. Friday a general session was held and Friday evening the annual banquet took place.

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Pressure Relieving
JOINT

Patented September 1, 1925

OHIO BANK BUILDING AT TOLEDO
Mills, Rhines, Ballman and Nordhoff, Architects

Architects Adopt This Positive Method of Insuring Great Facades

THE Cowing Joint is installed in the columns and weight carrying mullions at a mortar course. Its purpose is to relieve pressure thrown on the facing material by compression of steel, temperature changes, vibration and wind stresses. Experience has proved that these severe stresses, unless relieved, will crush and break the stone, terra cotta or marble.

Where the Cowing Joint is installed at each story height the building is completely insured against cracks and spalls, the mortar joints are protected from crushing and the maintenance cost of tuck-pointing is eliminated. The facade is in no manner weakened because the Cowing Joint carries the normal weight of the facing material and compresses only enough to relieve the stress.

See "SWEETS" Catalogue

Cowing Pressure Relieving Joint Co.
226 WEST SUPERIOR STREET CHICAGO, ILLINOIS

THE LATEST IN INVENTIONS

Editor's Note: This Department by Ray Belmont Whitman, Patent Attorney of New York City, is intended to inform the reader of the latest patented inventions each month in the field of THE ARCHITECT AND ENGINEER. The Patent Editor offers to the readers of ARCHITECT AND ENGINEER personal advice, without obligation, on any subject connected with Patents, Trade Marks, Designs and Copyrights. All inquiries should be addressed to "Patent Editor" in care of this magazine.

QUESTIONS AND ANSWERS

Q. 1. I filed a patent application on my invention and afterwards improved it and asked the attorney to change the application accordingly. He said this could not be done. Please advise regarding this. A. H. D., Fresno, Calif.

A. 1. Your attorney was correct. New matter cannot be added to an application as otherwise there would be endless confusion, inventors would get the benefit of several examinations for the one fee and the file would not show a proper filing date for all parts of the application. Your only recourse is to file an improvement application under a new number and date.

Q. 2. Does the Patent Office guarantee the validity of claims in the patents which it issues?
Leo Granger, Los Angeles, Calif.

A. 2. No. The Patent Office merely makes as thorough a search as possible and does the best it can with the facilities it has on hand to prevent the issue of invalid patents. They do a great work as far as their facilities permit but since any publication anywhere in the world may be used to prove a priority to invalidate a patent they are frequently held invalid on such publications as well as on differences of opinion by the court and the Patent Office as to what is now in the field searched by the latter. Statistics show that patents are held valid and infringed in somewhat more than half of the total cases adjudicated.

Q. 3. After my patent has issued, is it possible to get broader claims in it?
Martin Tracy, New York City, N. Y.

A. 3. Yes. This can sometimes be done by reissuing the patent providing the failure to claim the invention properly was due to inadvertence, accident, or mistake. There are many decisions as to just what constitutes these. Also the application for a release must be filed within two years of the issued date of the patent.

Q. 4. Is there any limit to the number of claims permitted in one patent?
R. F. D., Newport, Rhode Island.

A. 4. No. But recently the Patent Office has put into effect a rule that for every claim originally filed in a case or finally issued in the patent over twenty an additional filing fee, or final fee of $1.00 must be paid. If the applicant, through his attorney, files a needlessly large number of

[Please turn to Page 127]

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts quoted are figuring prices and are made up from average quotations furnished by material houses to three leading contracting firms of San Francisco.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

Overtime in wage scale should be credited with time and a half, Sunday and holidays double.

Bond—1½% amount of contract.

Brickwork—

Common, $29 to $35 per 1000 laid, (according to class of work).
Face, $70 to $95 per 1000 laid, (according to class of work).
Brick Steps, using pressed brick, $.95 lin. ft.
Brick Walls, using pressed brick on edge. 65c sq. ft. (Foundations extra.)
Brick Veneer on frame buildings, $.85 sq. ft.
Common, f.o.b. cars, $12.00 plus cartage.
Face, f.o.b. cars, $45.00 per 1000, carload lots.

HOLLOW TILE FIREPROOFING (f.o.b. cars in carload lots).

3x12x12 in.	$ 94.00 per M
4x12x12 in.	106.00 per M
6x12x12 in.	154.00 per M
8x12x12 in.	235.00 per M

HOLLOW BUILDING TILE (f.o.b. cars in carload lots).

8x12x5½	$108.00
6x12x5½	74.00

Composition Floors — 18c to 30c per sq. ft. In large quantities, 18c per sq. ft. laid.
Rubber Tile—65c per sq. ft.

Terazzo Floors—50c to 60c per sq. ft.
Terazzo Steps—$1.50 per lin. ft.
Mosaic Floors—80c per sq. ft.

Concrete Work (material at San Francisco bunkers) — Quotations below 2000 lbs. to the ton.

No. 3 rock, at bunkers	$1.40 per ton
No. 4 rock, at bunkers	1.40 per ton
Eliott pea gravel, at bnkrs.	1.40 per ton
Washed gravel, at bnkrs.	1.40 per ton
Eliott top gravel, at bnkrs.	1.40 per ton
City gravel, at bunkers	1.40 per ton
River sand, at bunkers	1.00 per ton
Delivered bank sand	1.00 cu. yd.

Note—Above prices are subject to discount of 10c per ton on invoices paid on or before the 15th of month, following delivery.

SAND

Del Monte, $1.75 to $3.00 per ton.
Fan Shell Beach (car lots, f.o.b. Lake Majella), $2.75 to $4.00 per ton.
Cement, $2.44 per bbl. in paper sks.
Cement (f.o.b. Job, S. F.) $2.64 per bbl.
Cement (f.o.b. Job, Oak.), $2.64 per bbl.
Rebate of 10 cents bbl. cash in 15 days.
Atlas "White" .....$ 8.50 per bbl.
Forms, Labors average 22.00 per M.
Average cost of concrete in place, exclusive of forms, 28c per cu. ft.
4-inch concrete basement floor.....13c to 14c per sq. ft.
4½-inch concrete basement floor.....14c to 15c per sq. ft.
2-inch rat-proofing....6½c per sq. ft.
Concrete Steps.....$1.26 per lin. ft.

Dampproofing—

Two-coat work, 20c per yard.
Membrane waterproofing—4 layers of saturated felt, $5.50 per square.
Hot coating work, $2.00 per square.

Electric Wiring — $3.00 to $9.00 per outlet for conduit work (including switches).
Knob and tube average $2.25 to $5.00 per outlet, including switches.

Elevators—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2500; direct automatic, about $2400.

Excavation—

Sand, 50 cents; clay or shale, $1.00 per yard.
Teams, $10.00 per day.
Trucks, $21 to $27.50 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—

Ten-foot balcony, with stairs, $65.00 per balcony.

Glass (consult with manufacturers)—

Double strength window glass, 15c per square foot.
Quartz Lite, 50c per square foot.
Plate 80c per square foot.
Art, $1.00 up per square foot.
Wire (for skylights), 27c per square foot.
Obscure glass, 25c per square foot.
Note—Add extra for setting.

Heating—

Average, $1.70 per sq. ft. of radiation, according to conditions.

Iron—Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg.site)

Common, $23.00 per M (average).
Common O. P. select, average, $30.00 per M.

1 x 6 No. 3—Form lumber	$20.00 per M
1 x 4 No. 1 flooring	42.00 per M
1 x 4 No. 2 flooring	40.50 per M
1 x 4 No. 3 flooring	35.00 per M
1 x 6 No. 2 and better flooring	41.00 per M
1¼ x 4 and 6 No. 2 flooring	50.00 per M

Slash grain—

1 x 4 No. 2 flooring	$35.00 per M
1 x 4 No. 3 flooring	33.00 per M
No. 1 common run to T. & G.	30.00 per M
Lath	4.00 per M

Shingles (add cartage to prices quoted)—

Redwood, No. 1	$ .85 per bdle.
Redwood, No. 2	.65 per bdle.
Red Cedar	.85 per bdle.

Hardwood Flooring (delivered to building)—

13-16x3¼" T & G Maple	$135.00 M ft.
1 1-16x2¼" T & G Maple	145.50 M ft.
⅝x3½ sq. edge Maple	132.50 M ft.

	13-16x2¼" T&G	⅝x2" T&G	5-16x2" Sq. Ed.
Clr. Qtd. Oak	$220.00 M	$160.00 M	$178 M
Sel. Qtd. Oak	150.00 M	122.00 M	131 M
Clr. Pla. Oak	155.00 M	110.00 M	113 M
Sel. Pla. Oak	132.00 M	79.00 M	97 M
Clear Maple	147.00 M	101.00 M	
Laying & Finishing	16c ft.	15c ft.	13c ft.

Wage—Floor layers, $9.00 per day.

Building Paper—

1 ply per 1000 ft. roll	$3.50
2 ply per 1000 ft. roll	5.40
3 ply per 1000 ft. roll	8.00
Sash cord com. No. 7	$ 1.00 per 100 ft.
Sash cord com. No. 8	1.10 per 100 ft.
Sash cord spot No. 7	1.60 per 100 ft.
Sash cord spot No. 8	1.90 per 100 ft.

Sash weights cast iron, $50.00 ton
Nails, $3.25 base.
Belgian nails, $3.00 base.

Millwork—

O. P. $80.00 per 1000. R. W., $80.00 per 1000 (delivered).
Double hung box window frames, average, with trim, $6.00 and up, each.
Doors, including trim (single panel, 1¾ in. Ore. pine) $6.75 and up, each.
Doors, including trim (five panel, 1¾ in. Oregon pine) $6.00 each.
Screen doors, $3.50 each.
Patent screen windows, 20c a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., $5.50 each.
Dining room cases, $6.50 per lineal foot.
Labor—Rough carpentry, warehouse heavy framing (average), $11.00 per M.
For smaller work, average, $22 to $30 per 1000.

Marble—(Not set), add 50c to 65c per ft. for setting.

Alaska	$1.40 sq. ft.
Columbia	1.40 sq. ft.
Golden Vein Yule Colo	1.70 sq. ft.
Pink Lepanto	1.50 sq. ft.
Italian	1.75 sq. ft.

Tennessee	1.70 sq. ft.
Verde Antique	3.00 sq. ft.

NOTE—Above quotations are for ⅞ inch wainscot in large slabs f.o.b. factory. Prices on all other classes of work should be obtained from the manufacturers.

Floor Tile—Set in place.

Verde Antique	$2.50 sq. ft.
Tennessee	1.50 sq. ft.
Alaska	1.35 sq. ft.
Columbia	1.45 sq. ft.
Yule Colorado	1.45 sq. ft.
Travertine	1.60 sq. ft.

Painting—

Two-coat work	30c per yard
Three-coat work	40c per yard
Whitewashing	4c per yard
Cold Water Painting	8c per yard

Turpentine, 83c per gal. in cans and 68c per gal. in drums.
Raw Linseed Oil—$1.25 gal. in bbls.
Boiled Linseed Oil—$1.28 gal. in bbls.

Carter or Dutch Boy White Lead in Oil (in steel kegs)

	Per. Lb.
1 ton lots, 100 lbs. net weight	12¼c
500 lb. and less than 1 ton lots	12½c
Less than 500 lb. lots	13c

Dutch Boy Dry Red Lead and Litharge (in steel kegs)

1 ton lots, 100 lb. kegs, net wt.	12¼c
500 lb. and less than 1 ton lots	12½c
Less than 500 lb. lots	13c

Red Lead in Oil (in steel kegs)

1 ton lots, 100 lb. kegs, net wt.	13¾c
500 lb. and less than 1 ton lots	14c
Less than 500 lb. lots	14¼c

Note—Accessibility and conditions cause wide variance of costs.

Patent Chimneys—

6-inch	$1.00 lineal foot
8-inch	1.50 lineal foot
10-inch	1.85 lineal foot
12-inch	2.10 lineal foot

Pipe Casings — 12" long (average), $7.50 each. Each additional inch 10c.

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.40
2 coats, lime mortar hard finish, wood lath	.52
2 coats, hard wall plaster, wood lath	.55
3 coats, metal lath and plaster	1.00
Keene cement on metal lath	1.25
Ceilings with ¾ hot roll channels metal lath	.67
Ceilings with ¾ hot roll channels metal lath plastered	1.40
Shingle partition ¾ channel lath 1 side	.62
Single partition ¾ channel lath 2 sides 2 inches thick	2.20
4-inch double partition ¾ channel lath 2 sides	1.30
4-inch double partition ¾ channel lath 2 sides plastered	2.45

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
2 coats Atlas cement, brick or concrete wall	1.25
3 coats cement finish No. 13 gauge wire mesh	1.75
3 coats Atlas finish No. 13 gauge wire mesh	2.05

Wood lath, $4.50 per 1000.
2.5-lb. metal lath (dipped) .19
2.5-lb. metal lath (galvanized) .22
3.4-lb. metal lath (dipped) .24
3.4-lb. metal lath (galvanized) .29
¾-inch hot roll channels, $45 per ton.
Hardwall plaster, $15.40 ton; $12.95 in paper sacks (rebate 15c sack).
Finish plaster, $16.40 ton; in paper sacks, $13.35 (rebate 10c sack).
Dealer's commission, $1.00 off above quotations.
Hydrate Lime, $19.50 ton.
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $43.00 per M.

Composition Stucco—$1.60 to 2.00 per sq. yard (applied).

Plumbing—

From $60.00 per fixture up, according to grade, quantity and runs.

Roofing—

"Standard" tar and gravel, $5.25 per square for 30 squares or over.
Less than 30 squares, $5.50 per sq.
Tile, $19.00 to $35.00 per square.
Redwood Shingles, $11.00 per square in place.
Cedar Shingles, $10.50 sq. in place.
Recoat, with Gravel, $3.00 per sq.

Sheet Metal—

Windows—Metal, $1.80 a sq. foot.
Fire doors (average), including hardware, $2.00 per sq. ft. (not

Skylights—

Copper, $1.35 sq. ft. (not glazed).
Galvanized iron, 28c sq. ft. (not glazed).

Stone—

Granite, average, $5.50 sq. foot in place.
Sandstone, average Blue, $3.50; Boise, $2.60 sq. ft. in place.
Indiana Limestone, $2.60 per sq. ft. in place.

Store Fronts—

Copper sash bars for store fronts, corner, center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Steel Structural—$84 per ton (erected). This quotation is an average for comparatively small quantities
Light truss work higher; plain beam and column work in large quantities, less.
Cost of steel for average building (erected), $78.00 per ton.

1930 WAGE SCHEDULE FOR SAN FRANCISCO BUILDING TRADES

Fixed by the Impartial Wage Board

Craft	Journeymen Mechanics
Asbestos workers	$ 8.00
Bricklayers	11.00
Bricklayers' hodcarriers	7.00
Cabinet workers, (shop)	7.50
Cabinet workers, (outside)	9.00
Carpenters	9.00
Cement finishers	9.00
Electric workers	9.00
Electrical fixture hangers	8.00
Elevator constructors	10.00
Elevator helpers	7.00
Engineers, portable and hoisting	9.00
Glass workers	8.50
Hardwood floormen	9.00
Housemovers	8.00
Housesmiths, arch. iron, skilled all branches	9.00
Housesmiths, arch. iron, not skilled all branches	8.00
Housesmiths, reinforced concrete, or rodmen	9.00
Iron workers (bridge & structural) including engineers	11.00
Laborers, building (6-day week)	5.50
Lathers, channel iron	10.00
*Lathers, all other	8.50
Marble setters	10.00
Marble helpers	8.00
Marble cutters and copers	8.00
Marble bed rubbers	7.50
Marble polishers and finishers	7.00
Millmen, planing mill department	7.00
Millmen, sash and door	6.00
Millwrights	8.00
Model makers	10.00
Model casters	9.00
Mosaic and Terrazzo workers	9.00
Mosaic and Terrazzo helpers	6.00
Painters	9.00
Painters, varnishers and polishers (shop)	7.50
Painters, varnishers and polishers (outside)	9.00
Pile drivers and wharf builders	9.00
Pile drivers engineers	10.00
Plasterers	11.00
Plasterers' hodcarriers	7.50
Plumbers	10.00
Roofers, composition	8.00
Roofers, all others	8.00
Sheet metal workers	9.00
Sprinkler fitters	10.00
Steam fitters	10.00
Stair builders	9.00
Stone cutters, soft and granite	8.50
Stone setters, soft and granite	9.00
Stone carvers	8.50
Stone derrickmen	9.00
Tile setters	10.00
Tile helpers	6.00
Auto truck drivers, less than 2500 lbs.	5.50
Auto truck drivers, 2500 to 4500 lbs.	6.00
Auto truck drivers, 4500 to 6500 lbs.	6.50
Auto truck drivers, 6500 lbs. and over	7.00
General teamsters, 1 horse	5.50
General teamsters, 2 horses	6.00
General teamsters, 4 horses	6.50
Plow teamsters, 4 horses	6.50
Scraper teamsters, 2 horses	6.00
Scraper teamsters, 4 horses	6.00

*On wood lath if piece rates are paid they shall be not less than such an amount as will guarantee, on an average day's production of 1600 lath, the day wage set forth.

Eight hours shall constitute a day's work for all Crafts except as otherwise noted.

Plasterer's hodcarriers, bricklayers' hodcarriers, roofers, laborers, and engineers, portable and hoisting, shall start 15 minutes before other workmen, both at morning and noon.

Five and one-half days, consisting of eight hours on Monday to Friday inclusive, and four hours on Saturday forenoon shall constitute a week's work.

Overtime shall be paid as follows: For the first four hours after the first eight hours, time and one-half. All time thereafter shall be paid double time. Saturday afternoon (except laborers), Sundays from 12 midnight Friday, and Holidays from 12 midnight of the preceding day shall be paid double time. On Saturday laborers, building, shall be paid straight time.

Where two shifts are worked in any twenty-four hours shift time shall be straight time. Where three shifts are worked, eight hours pay shall be paid for seven hours on the second and third shifts.

All work shall regularly be performed between the hours of 8 A. M. and 5 P. M., provided, that in emergencies or where premises cannot be vacated for work by mechanics until the close of business, men then reporting for work shall work at straight time; but any work performed after midnight shall be paid time and one-half except on Saturdays, Sundays, and holidays, when double time shall be paid.

Recognized holidays to be New Year's Day, Decoration Day, Fourth of July, Labor Day, Admission Day, Thanksgiving Day and Christmas Day.

Men ordered to report for work, for whom no employment is provided, shall be entitled to two hours pay.

THE LATEST IN INVENTIONS

[Concluded from Page 124]

claims which do not patentably distinguish from one another the Examiner may reject the case on the ground of "multiplicity." Patents have issued with as many as 389 claims, although the average week in and week out is between 6 and 7 claims. It is interesting to note that the average number of claims in patents taken out through the offices of most advertising attorneys is considerably below the average for all patents above, and that the average of patents issued to the Patent Attorneys for large corporations is considerably above. For instance, the author served one large corporation nearly six years, averaging throughout the period twenty-five claims per patent on a large number of cases of all kinds, both simple and complicated. A large number of claims does not always mean greater protection to the inventor, but it often does.

Q. 5. A neighbor has offered to back me to finance patenting and marketing my invention providing I include his name as co-inventor. Is it all right to do this? Allan Degnan, San Francisco.

A. 5. No. If your neighbor is not in truth a co-inventor and an unfriendly party learns of the arrangement, the patent may be declared invalid. You can doubtless satisfy your neighbor by giving him a 50% interest in the proceeds made out of the invention (be on your guard not to assign outright any portion of your title to your patent).

Q. 6. My employer insists I must assign my patent to him on the ground that it was developed on his time and the patent filed at his expense. The patent has since proven of great value and I wonder if the law requires me to do this.
M. Granville, Harrisburgh, Penna.

A. 6. No. The employer may only obtain from you a shop right or license to use the invention, unless there has been previous specific understandings.

WOOD COMES BACK

Henry Klein of Elmhurst, L. I., claims to have discovered a means of making wood just as flameproof and incombustible as steel or cement. Mr. Klein has developed a wood that is said to be safe against fire and has taken advantage of its natural heat resisting qualities. He believes he has saved the lumber and wood-working industries from not only losing more ground but has made it possible to create new fields for the use of wood for entirely new purposes. To quote Mr. Klein:

"At about the time the World War was coming to an end, I made a study of our own wood-working business and the entire lumber and wood-working industry. I found that wood was being replaced on

The Russ, Hunter-Dulin, Telephone, new Shell, and other buildings dominating the San Francisco skyline testify to the promptness and efficiency of Soule steel service.
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Veneering Tile	Paving Brick
Furring Tile	Step & Walk Brick
Fireproofing Tile	Wall Coping
Floor Tile	Flue Lining

DICKEY Flashing Blocks

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an ever-widening scale in building construction because it was considered a fire hazard. Other material was being demanded where wood had heretofore always been used. This was not because people preferred the other materials; in reality they hated to see wood disappearing. It was simply a case of necessity—the ever-increasing demands for fire safety compelled the change.

"I studied the steel and cement industries and on all hands I found extensive research laboratories in which these products were being constantly improved. This was something unheard of in the lumber and wood business. We had been using wood for years, but we had taken it for granted as a gift of nature.

"Why not some research in wood? The more I asked myself the question the more it appealed to me as the 'way out.' I called a very able chemist, Dr. A. Winogradow, to our plant and I put the problem to him. 'Is it not possible,' I asked him, 'for us to develop a means of treating wood so that it will be just as fire safe as other incombustible materials, maybe more so?' I had known of numerous so-called fireproof wood treatments, but I knew that all of them had certain glaring faults.

"Dr. Winogradow told me the cost of setting up a research laboratory and making the necessary experiments would be many thousands of dollars, and take many years, but I was determined to see this job through and so we went to work.

"We have been through a tough battle ever since we started. We have come across obstacles that at times seemed insurmountable. It was not only a problem of finding a chemical which would keep wood from burning, but we had to have a chemical that would preserve the natural beauty and adaptability of the wood so that it would lose none of its charm, none of its 'working' qualities and none of its usefulness. All this we did, but still we were not satisfied because we had not yet discovered the means of controlling the treating process whereby we could be certain of its flameproof efficiency.

"At last came success. We had completed a process of making wood more flameproof and of so controlling our process that we were able to tell exactly that each piece of wood we turned out was uniformly flameproof. Look at that door behind you. I can tell you for a certainty that a fire could be built on the other side of it, the temperature run up to 1700 degrees F., and that fire maintained for exactly 60 minutes—not 59 minutes—before you or I would be even uncomfortable in this room. If any other door were in its place and such a fire applied to it, this room would be filled with smoke and poison gas within ten or fifteen minutes and flames would be eating through into this room.

"Wood can be prepared for every purpose for which it is used—for doors, walls, panels, beams, floors; for ships and yachts; for airplanes and dirigibles; for hotels and office buildings."

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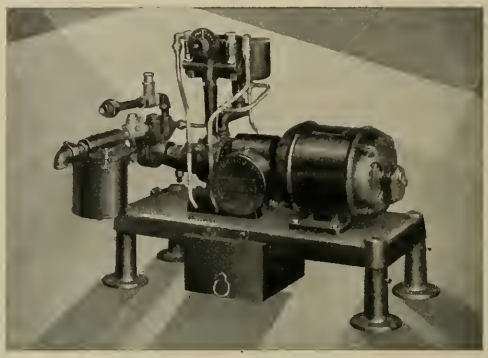

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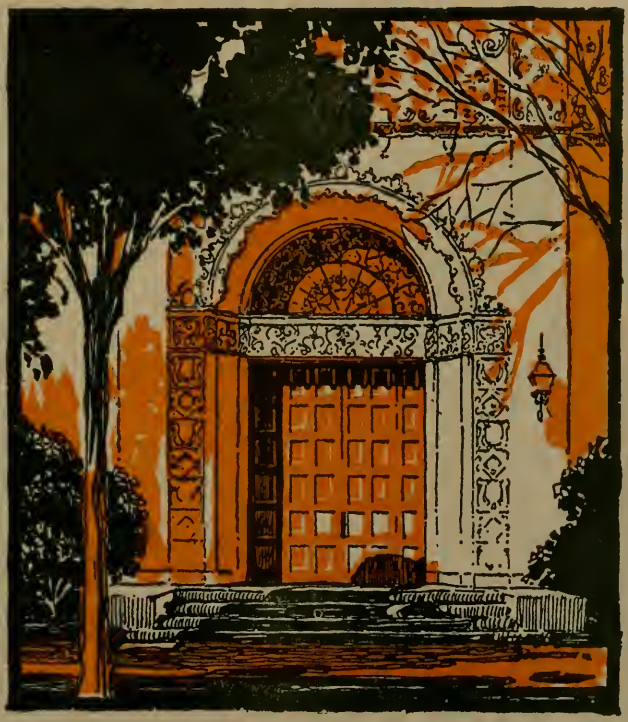
The ARCHITECT AND ENGINEER



SEPTEMBER
1930

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Who's Who in this Issue

L. H. NISHKIAN, structural engineer for the Park Presidio High School group, described in this issue, was born in Constantinople, in 1882. In 1906, he took his B. S. degree in Civil Engineering, at the University of California. For several years Mr. Nishkian worked for various architects and engineers in San Francisco, Los Angeles and Portland, on the structural design of numerous buildings and bridges. From 1912 to 1918, he was in the employ of the Board of Public Works, City of San Francisco, first in the office of the City Engineer, and later, as Consulting Structural Engineer in the Bureau of Building Inspection. Since 1919 to date, he has been in private practice, with office in San Francisco, and has made the structural plans of many industrial and commercial buildings in San Francisco, Los Angeles, and elsewhere, and particularly a large number of theater buildings, including the Fox Theater in San Francisco, described in a previous issue. Jointly with D. B. Steinman, of New York, he has developed a graphic method for the design of continuous beam and frame, which is quite generally used by American Engineers. Mr. Nishkian is a member of the American Society of Civil Engineers, and is on the Engineering Committee representing that Society in the drafting of the California Uniform Building Code, sponsored by the State Chamber of Commerce. He is also a director of the Structural Engineers Association of Northern California.

ELLIOTT TAYLOR, whose article on Fireplaces appears in this issue, is a writer whose field in the past has been various business and class publications in the West, where his name has been known for a dozen years. In discussing the adaptation of modern gas-fired equipment to various schemes of interior decorating, Mr. Taylor speaks as Educational Director of the Pacific Coast Gas Association, and as something of an amateur interior decorator in his own right.

L. G. SCHERER, who writes pointedly on The Architect and Advertising, is practicing architecture in Los Angeles where his residence work is best known. Mr. Scherer has been identified with the profession since 1923 at which time he designed the buildings for the Monroe Doctrine Centennial Exposition. He was one of the collaborating designers for the Sesqui-Centennial Exposition in Philadelphia three years ago. In 1928 he won the competition to design buildings for the Pacific Southwest Exposition in Long Beach but on account of an unfortunate incident he was unable to fulfill the position. Mr. Scherer's work in Southern California has been largely confined to residences, including a $300,000 home for W. H. Mead in Hancock Park; an English house for C. C. Albright and residences for Joseph H. Walt at Flintridge and C. Fred Stewart at Bel Air, and others.

WILLIAM E. FISHER AND ARTHUR A. FISHER, architects of Denver, Colorado, whose recent buildings are featured, are both members of the Denver Chapter of the American Institute of Architects. They have been practicing in Colorado for a number of years with signal success. In 1929 the firm was awarded a medal for distinctive achievement in architecture by the Denver City Club. The latter invited all of the architects in the Rocky Mountain Region to submit examples of their executed work, and the award was made by a Jury selected from members of the Architectural League of New York. Besides public buildings the firm has designed office, commercial and bank buildings, apartments, hotels and residences.

MESSRS. KENT & HAAS, winners of the San Mateo Congregational Church competition, have been practicing architecture in San Francisco for the past five years. **Thos. J. Kent** is a native of San Francisco and received his architectural training under the patronage of Arthur Brown, Jr., in the Atelier of the San Francisco Architectural Club. Prior to forming partnership with Mr. Haas, Mr. Kent was employed in the offices of the late Willis Polk, Bakewell & Brown and Lewis P. Hobart. **Andrew T. Haas** was born in Oakland and is a graduate of the School of Architecture of the University of California. Recent work of this firm includes many of the new financial offices on the Pacific Coast and residences in San Francisco and the East Bay District.

ROLLIN S. TUTTLE, who designed the Mail, News and Star Building at Los Gatos, has been practicing architecture in California for a number of years. For a time he was in partnership with his brother, the latter now practicing in Alameda. Mr. Tuttle is best known for his church work. Many buildings of this type have been built by him throughout the State of California. About two years ago he moved to Los Gatos from Oakland and upon completion of the Mail Building, he established a studio on the second floor. Mr. Tuttle is at present designing a new church for Ukiah and is completing construction of a smaller one at Livermore.

SIDNEY B., NOBLE AND ARCHIE T. NEWSOM, architects of the A. H. Hills residence in Piedmont, have offices in Oakland (See **Architect and Engineer** for June, 1930).

JULIAN C. MESIC. (See **Architect and Engineer** for October, 1929).

JOHN J. GOULD, structural engineer, was associated with L. H. Nishkian in the structural design of the Park Presidio High School, San Francisco. He is employed in Mr. Nishkian's office in San Francisco.

CHARLES E. PETERSON. (See **Architect and Engineer** for May, 1930).

$27,500
in prizes for architects

Class A: Design for a bathroom suitable for homes costing *not more* than $15,000 to build.

First prize	$5,000.00
Second prize	2,500.00
Third prize	1,000.00
Fourth prize	500.00
Fifth prize	250.00
Ten prizes of	100.00
Twenty prizes of	50.00
One hundred prizes of	25.00
	$13,750.00

Class B: Design for a bathroom suitable for homes in the building of which cost *is not* a major consideration.

First prize	$5,000.00
Second prize	2,500.00
Third prize	1,000.00
Fourth prize	500.00
Fifth prize	250.00
Ten prizes of	100.00
Twenty prizes of	50.00
One hundred prizes of	25.00
	$13,750.00

Complete statement of conditions governing the competition

Eligibility: The competition is open to architects and architectural draftsmen. Designs may be submitted as the work of one or more architects, of one or more architectural draftsmen or of a firm of architects.

Each architectural draftsman shall give on the card referred to under paragraph, "Identification", in addition to his name, the name of a practicing architect as a reference.

Application blanks are not required.

No employee of the American Radiator & Standard Sanitary Corporation may enter the competition.

Time: The competition closes 12 Midnight, October 30, 1930. Designs must be postmarked before that hour.

Drawings required: (a) An elevation of *each* side of the bathroom (room may be rectangular, octagonal or any desired shape); (b) Floor plan; (c) Ceiling plan, where special treatment is indicated.

The elevations shall be drawn at a scale of three-quarters of an inch to a foot. The floor and ceiling plans, at a scale of three-eights of an inch to a foot.

Designs for Class "A" and Class "B" bathrooms shall be drawn on separate sheets, each mounted on cardboard twenty-six inches by thirty-nine inches. Each sheet shall bave the title "A Design for a Bathroom—Class A", (or) "Class B" (as the case may be). Drawings shall not be framed.

All drawings shall be in black ink. The sides of the bathroom shall be shown in direct elevation and no perspective elevation or rendering of any kind shall be shown.

A color chart indicating the color of the plumbing fixtures, walls, ceiling, floor and decorations shall be shown. A legend shall be given indicating the materials used and a list of the plumbing fixtures and accessories shall be given.

A competitor may submit one design in Class "A" and one design in Class "B", but not more than one design in each class may be submitted by any competitor, group or firm.

Plumbing fixtures and fittings: The selection of fixtures and fittings shall be made from the designs illustrated in the "STANDARD" general catalogue, or in the book, "STANDARD" Plumbing Fixtures for the Home. The book, "STANDARD" Plumbing Fixtures for the Home, and a color chart will be mailed upon request.

The plumbing fixtures shall be in one of the nine colors in which "STANDARD" Plumbing Fixtures are made, or in white.

Designs entered in Class "A" shall show one lavatory, one water closet and one bath and may or may not include a shower above the bath. Number and character of plumbing fixtures and fittings are not limited for designs in Class "B".

Identification: The competitor's name shall not appear on the design. On the back of the mount the competitor shall draw an identification mark. This mark shall also be drawn on a card, three inches by five inches, bearing the competitor's name and address. This card shall be placed in a plain envelope, sealed and glued to the back of the mount.

Where to send drawings: Drawings shall be sent prepaid, or delivered to: Standard Sanitary Mfg. Co., Competition Committee, Pittsburgh, Pa.

Care should be exercised in preparing the designs for mailing so that they will be received in good condition. Each design entered in the competition is submitted at the risk of the competitor. The Standard Sanitary Mfg. Co. will not be responsible for the loss of, or damage to, designs while in transit or in its custody.

Title to designs: The prize-winning designs become the sole property of the Standard Sanitary Mfg. Co.

The Standard Sanitary Mfg. Co. reserves the right to publish or reproduce any prize-winning design, or to make it adaptable for publication or reproduction.

Should the Standard Sanitary Mfg. Co. desire to publish or reproduce a competitor's design, he will be extended the privilege of signing his work.

Jury of awards: The designs will be judged by a jury of awards composed of the following architects: William H. Beers, A. I. A., of Beers & Farley, New York City; Addison B. LeBoutellier, A. I. A., of Ripley & LeBoutellier, Boston; Eugene H. Klaber, A. I. A., of E. H. Klaber & E. A. Grunsfield, Jr., Chicago; Louis C. Mullgardt, F. A. I. A., San Francisco; Allison Owen, F. A. I. A. of Diboll & Owen, New Orleans.

Points on which the designs will be judged: (a) Originality, (b) Practicability, (c) Distinctiveness in color scheme and in arrangement of fixtures, (d) Suitability in the use of materials.

Announcement of Awards: The names of the prize winners will be announced as soon as possible after the closing date of the competition.

Professional adviser: The professional adviser of the Standard Sanitary Mfg. Co. in this competition is Howard K. Jones, A. I. A., of the firm of Alden, Harlow & Jones, Architects, 2403 Farmers Bank Building, Pittsburgh, Pa.

This program has received the approval of the Committee on Competitions, Pittsburgh Chapter, American Institute of Architects.

Requests for further information regarding this competition should be addressed to the Standard Sanitary Mfg. Co., Pittsburgh, Pa.

Standard Sanitary Mfg. Co.

Competition Committee — — — — 106 Sixth Street, Pittsburgh, Pa.

Division of AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

"Standard" PACIFIC PLUMBING FIXTURES

VOLUME CII
NUMBER 3

The ARCHITECT AND ENGINEER

SEPTEMBER
1930

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Contents

COVER DESIGN—by John E. Dinwiddie
FRONTISPIECE—The Crystal Ball (an electrolier)

TEXT

Denver Architecture ... 35
George W. Eggers
The A. H. Hills Residence, Piedmont ... 59
Sidney B., Noble and Archie T. Newsom, Architects
A Small Town Newspaper Building ... 67
Rollin S. Tuttle, Architect
The Fireplace in the Home ... 81
Elliott Taylor
Professional Advertising ... 87
L. G. Scherer, Architect
Planning a Civic Center ... 91
Julian C. Mesic
Competition for Congregational Church ... 99
Structural Features of the Park Presidio High School, San Francisco ... 105
John J. Gould, S. E.
The Architect's Viewpoint ... 108
Charles H. Alden, F. A. I. A.
Editorial Chat ... 110
Modern Design for Los Angeles Office Building ... 105

PLATES AND ILLUSTRATIONS

Recent Work of William E. Fisher and Arthur A. Fisher, Denver, Colorado
Entrance, the Midland Savings Building ... 37
Security Building ... 38-39
Colorado National Bank ... 40-41
Denver National Bank ... 42-43
Weicker's Depository ... 44
National Jewish Hospital ... 45-46
Morey Junior High School ... 47
South Denver High School ... 48-51
Denver Polo Club ... 52-53
Voorhies Memorial ... 54-55
Residence of L. M. Hughes ... 56-57
Residence of A. H. Hills, Piedmont, California ... 58-63
Sidney B., Noble and Archie T. Newsom, Architects
Lucerne Elementary School, Lake County ... 64
Norman R. Coulter, Architect
Building for the Mail, News and Star, Los Gatos ... 66-67
Rollin S. Tuttle, Architect
Portfolio of Camera Sketches of Spanish Architecture ... 69-79
Lothar C. Maurer
Period Designs of Fireplaces ... 82, 84, 86
Models of Proposed Oakland Civic Center ... 90-92
Julian C. Mesic
Pen Sketches by Charles E. Peterson ... 93-98
Design for Congregational Church, San Mateo ... 100
Kent and Haas, Architects
Park Presidio High School, San Francisco ... 103-7
E. Clem Wilson Building, Los Angeles ... 111-12

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THE CRYSTAL BALL

Electrolier in Residence at San Mateo, California

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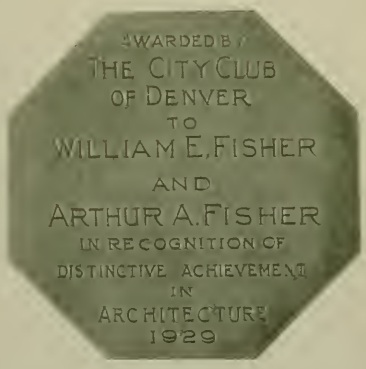
The ARCHITECT AND ENGINEER

VOLUME CII SEPTEMBER, 1930 NUMBER THREE

DENVER ARCHITECTURE

RECENT WORK of WILLIAM E. FISHER and ARTHUR A. FISHER

by GEO. W. EGGERS



DENVER is favored, as many of the great cities of history have been favored, with the beauty of high-lying site, the proximity of noble mountains, and the clarity of a brilliant atmosphere. These are among the conditions that inspired the splendors of the Mediterranean architectures, these and the fiery pride which ancient cities had in themselves and their past. And some of this last, we may well hope, Denver possesses also.

Tradition, bold and colorful tradition, tales of blood and thunder, of sweat and the intervention of the gods, were all of them in "the makings" of the architectural mood. And when it comes to such matters as these Denver has its colorful tradition too. Over the reaches of which it is the metropolis, Spanish conquistadores and barefooted friars, French trappers and American prospectors have moved in a long-unrolling treasure-hunt, sometimes celestial as well as earthly in its aims. It was a continuous drama of adventuring against a background of strange peoples who always watched and sometimes struck. Southward lay the pueblos, earthbuilt and ruddy like those who made them, and to the north, the gaunt economies of nomadic occupation. And upon the observant and imaginative men who came to the West to stay these characters deeply inscribed themselves.

And as for the old Mediterranean culture, it was that which first came patterning an arabesque across this region leaving fragments of its language on the landmarks where some of it endures today. And the later floods of French and Yankees, follow-

ing the streams for beaver and for gold, no less picturesque but possibly more successful, left their language, too, upon the hills and in the canyons.

This is the kind of material, those are types of the conditions that offer their color to the creative arts of the West. The plains and mountains have been moats and battlements against the invasion of many of the later fashions which came to reduce the individuality of other American localities both to the east and westward. Artistically, Denver's comparative isolation has been a superlative blessing and the city is by no means unaware of it. In the past year or two it has been putting out publications on the history of its arts, literature, drama, music and design. For a much longer period it has been contriving to set forth its own spirit with types of architectural expression that tend more and more to do it justice.

Denver's architects are building on their own. And they are going in for something much finer than a fortuitous novelty. They are embodying, and some of them with notable success, those virtues of economy of means, simplicity of materials, relation of environment, fitness to use, and breadth of conception which throughout its long past have been the necessary philosophy of this western country. Here the step from primitive conditions to modern civilization has been so short in point of time that the mood of the former still colors the technique of the latter. It is an unusual condition in history and a dramatic one.

The firm of architects whose work is here illustrated is one in which these conditions bear fruit in a marked degree. Their scope has been broad. Their work includes projects both public and private; individual and institutional; they have addressed themselves with apparently equal fervor to problems of pretentious building and problems of modest scale. Their style seems to owe much of its solidity to what we have called the necessary philosophy of this western country. Their designs are colored by this as well as by the deep heritage of the European civilizations to which even our modern life owes its form.

The West appears in the economy and directness of these plans and silhouettes; in the boldness and independence with which these buildings often surprise us; in the resourcefulness with which they meet new and peculiar conditions. And the traditional factor is to be recognized in the grace, the mastery and the deference with which renaissance and classic form is used when that is the thing the situation calls for.

The facade of the Morey Junior High School exhibits a sensitive and winsome character peculiarly fitting to the spirit of adolescent youth which the school is designed to shelter. This building embodies, as a school building should, the most living qualities of the past in relation to the living present. In it the traditional elements bend to the modern conditions without losing their historical continuity, as the old Spanish hauteur bent, without breaking, to the life of plains and pueblos. And for classic form handled with uncompromising scholarship and authority, we may turn to the Voorhies Memorial Colonnade in the Civic Center.

Playfulness and audacity lighten the austerer virtues of the South Side School design, and it was a happy choice of style which made such an important place for sculptures which give this building much of its expression and through which the mood of the senior high school period is set forth. A similar play of wit in making way for the "Covered Wagon" frieze on a downtown office, gives the Midland Savings Building kinship with the lively architecture of the abbeys of the Middle Ages teeming with expressive life.

* * *

It is of more than passing interest to chronicle at this time the fact that Messrs. William E. Fisher and Arthur A. Fisher, architects of the buildings described above, were recipients of the fine arts award made by the City Club of Denver, in recognition of distinctive achievement in architecture during the year 1929.

ENTRANCE, MIDLAND SAVINGS BUILDING, DENVER, COLORADO

WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

DETAIL OF FACADE, SECURITY BUILDING, DENVER, COLORADO
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

SECURITY OFFICE BUILDING, DENVER, COLORADO
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

THE COLORADO NATIONAL BANK, DENVER, COLORADO
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

BANKING ROOM, THE COLORADO NATIONAL BANK, DENVER
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

ENTRANCE, DENVER NATIONAL BANK, DENVER, COLORADO
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

INTERIOR, DENVER NATIONAL BANK, DENVER, COLORADO

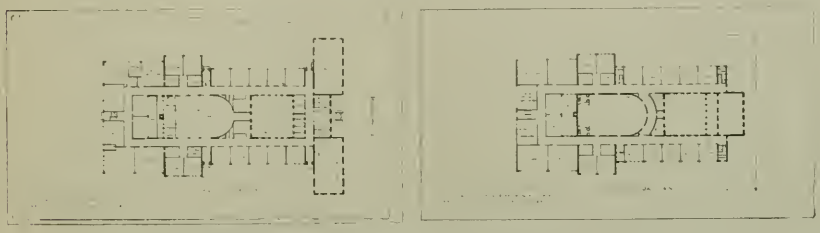
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

WEICKER'S DEPOSITORY, DENVER, COLORADO
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

ENTRANCE, B'NAI B'RITH NATIONAL JEWISH HOSPITAL, DENVER, COLORADO
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

B'NAI B'RITH NATIONAL JEWISH HOSPITAL, DENVER, COLORADO
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

MOREY JUNIOR HIGH SCHOOL, DENVER, COLORADO
William E. Fisher and Arthur A. Fisher, Architects



PLANS, MOREY JUNIOR HIGH SCHOOL, DENVER, COLORADO
William E. Fisher and Arthur A. Fisher, Architects

SOUTH DENVER HIGH SCHOOL, DENVER, COLORADO
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

CAMPANILE, SOUTH DENVER HIGH SCHOOL, DENVER, COLORADO
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

ENTRANCE, SOUTH DENVER HIGH SCHOOL, DENVER, COLORADO
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

AUDITORIUM, SOUTH DENVER HIGH SCHOOL, DENVER, COLORADO
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

DENVER POLO CLUB, DENVER, COLORADO

WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

DETAIL, DENVER POLO CLUB, DENVER, COLORADO
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

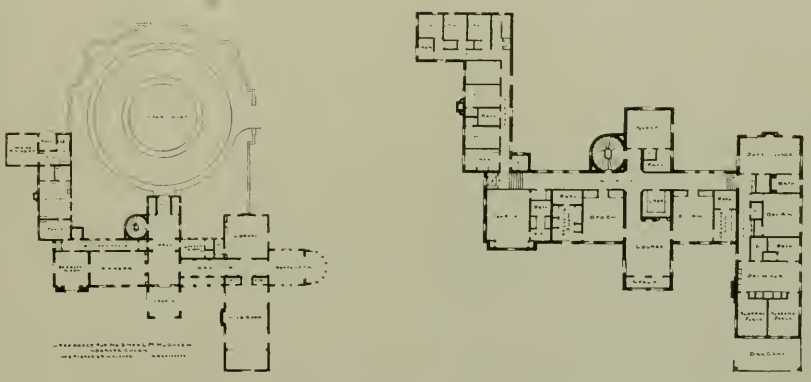
DETAIL, VOORHIES MEMORIAL, CIVIC CENTER, DENVER
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

VOORHIES MEMORIAL, CIVIC CENTER, DENVER, COLORADO

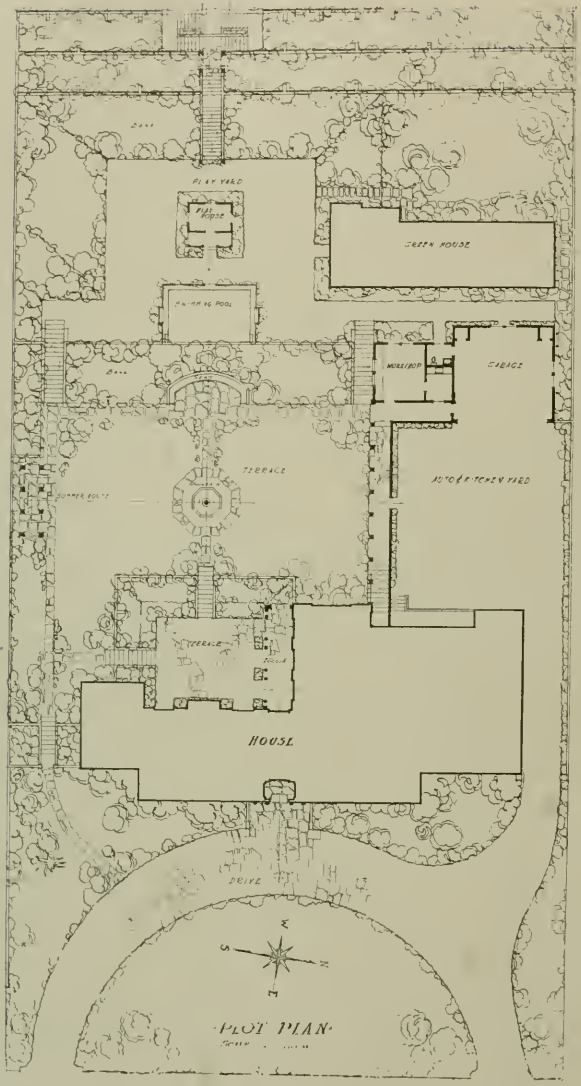
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

POMPEIAN ROOM, RESIDENCE OF MR. AND MRS. L. M. HUGHES, DENVER
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

RESIDENCE OF MR. AND MRS. L. M. HUGHES, DENVER, COLORADO
William E. Fisher and Arthur A. Fisher, Architects



PLANS, RESIDENCE OF MR. AND MRS. L. M. HUGHES, DENVER, COLORADO



PLOT PLAN, RESIDENCE OF A. H. HILLS, PIEDMONT, CALIFORNIA
SIDNEY B., NOBLE AND ARCHIE T. NEWSOM, ARCHITECTS

RESIDENCE OF A. H. HILLS, ESQ., PIEDMONT, CALIFORNIA
Sidney B., Noble and Archie T. Newsom, Architects

THE A. H. HILLS RESIDENCE

PIEDMONT

THE residence of Mr. and Mrs. A. H. Hills, Sea View Avenue, Piedmont, is so located that a commanding sweep of the bay region may be had from all the principal rooms. In fact, in planning the house, actual survey lines of sight to various points of interest were determined in order that the views from windows might be the most advantageous. The property extends through from street to street in a series of terraced gardens, including a court at the rear, overlooking a swimming pool and childrens' play house. On one of the lower terraces there is a complete green house planned particularly for the raising of orchids, one of Mr. Hills' own interests. On axis lines with the upper terraces are such features as a fountain, tile seat, tea house, and long broken flights of steps, bounded by ornamental columns surmounted with pergolas. The house roofs are of soft toned green glazed tile that sparkle and blend with the gardening.

The residence itself is of the medieval Italian period as seen in the Davanzati Palace of Florence, the detail and ornament being taken from actual measured drawings of that wonderful old example. This same character is carried throughout the lower floor, as shown in the decoration of ceiling beams, carved panels of the doors, and over all pattern of the dining room walls. A feature of the reception hall is the ornate wrought iron stair rail of grapes, vines and leaves in natural scrolls, leading to the second floor hall. The mantles of the liv-

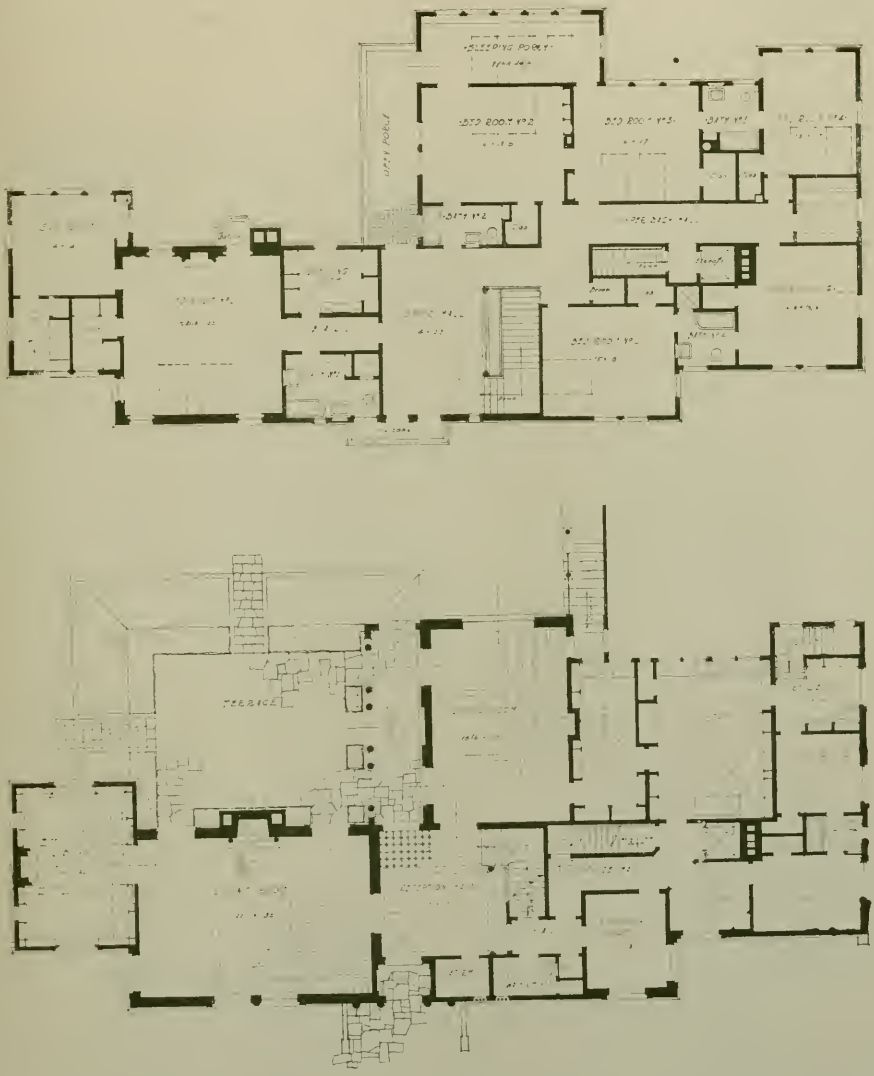
RESIDENCE OF A. H. HILLS, PIEDMONT, CALIFORNIA
Sidney B., Noble and Archie T. Newsom, Architects

RESIDENCE OF A. H. HILLS, PIEDMONT, CALIFORNIA

SIDNEY B., NOBLE AND ARCHIE T. NEWSOM, ARCHITECTS

CORNER OF DINING ROOM, RESIDENCE OF A. H. HILLS, PIEDMONT

SIDNEY B., NOBLE AND ARCHIE T. NEWSOM, ARCHITECTS



PLANS, RESIDENCE OF A. H. HILLS, PIEDMONT, CALIFORNIA

SIDNEY B., NOBLE AND ARCHIE T. NEWSOM, ARCHITECTS

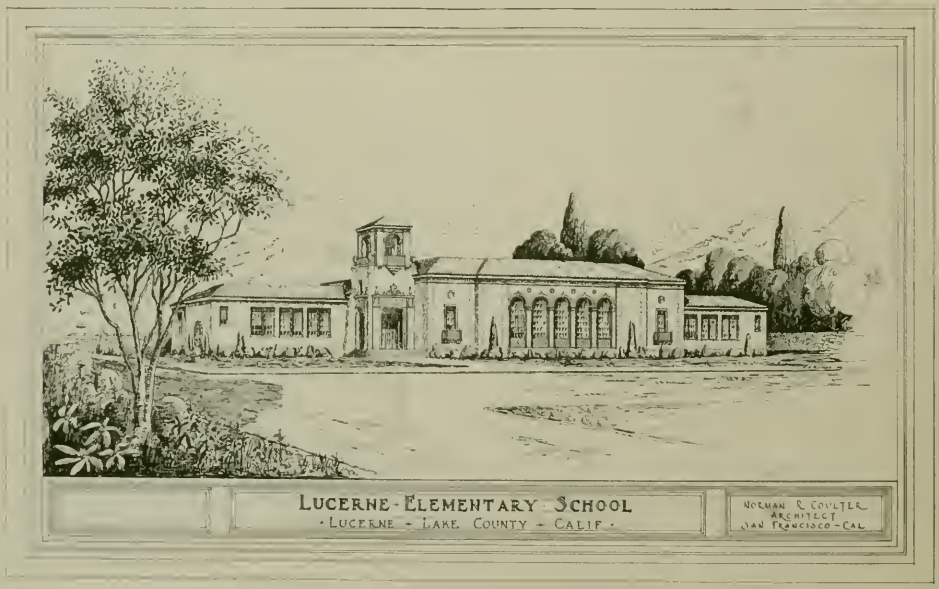
ing room and library are carved from Italian travertin, retaining the porous character of the material to give age and soft lines to the ornament and mouldings. The kitchen is somewhat featured in that it is all tiled, including the ceiling, which groins up to a center vent.

Departing from the Italian style, the bed rooms are done in French, Louis XVI, with paneled walls painted and glazed and set off with crystal electric fixtures, and hardware of the gilded French design. The main bed room has a carved wood mantle and marble border with carved mirror head above. Bath rooms are tiled with pictorial inserts to break up the plain colors. The main bath is of a rose, purple, gold and black scheme.

In the basement there is a large entertainment room for dancing, cards, etc. Here is a large fireplace and ample facilities for serving refreshments. Installed in the house is a pipe organ with sound ducts to both this social hall and the living room above. The outlet of this duct in the living room is concealed by a carved oak grill fitting in with the character of the doors and other ornamental woodwork.

A covered colonade leads from the main house to a garage, shop and tool storage, forming a north side enclosure for the garden court. The garage is fitted for minor work and includes a regular gas filling pump. Several improvements in the house include such conveniences as a cold storage plant, so arranged that furs may be hung away. There is a fully equipped laundry and an oil burning concealed vapor heating system. An electric elevator leads from the basement up through the house, thereby saving many a step, due to the high ceilings.

The residence, with its out buildings and landscaping, possesses uniformity of style and character that reflect capable handling on the part of the architects, Messrs. Sidney B., and Noble and Archie T. Newsom.



LIVING ROOM, RESIDENCE OF MR. AND MRS. L. M. HUGHES, DENVER
WILLIAM E. FISHER AND ARTHUR A. FISHER, ARCHITECTS

BUILDING FOR THE MAIL, NEWS AND STAR, LOS GATOS, CALIFORNIA

Rollin S. Tuttle, Architect

BUILDING FOR THE MAIL, NEWS AND STAR, LOS GATOS, CALIFORNIA
ROLLIN S. TUTTLE, ARCHITECT

A SMALL TOWN NEWSPAPER BUILDING

BY ROLLIN S. TUTTLE, Architect

TO get away from the stereotype flat and colorless commercial building, the California style of architecture was used in the design of the *Mail, News & Star* Building at Los Gatos. The facade is along studio lines. There is a fore-court or patio giving space for an interesting variety of planting. The approaches are paved with Carmel flag stone. The front wing contains the offices of the publisher with the business and editorial rooms adjoining. An outside stairway of colorful tile leads to a suite of rooms occupied by the writer who designed the building. Back of these rooms is the print shop, 36 feet by 56 feet, with nine large windows.

All the walls, inside as well as outside, are constructed of reinforced concrete. The cement was carefully poured into forms and moulds, no finish plaster being used inside or out. A wash of white cement with just a suggestion of color produced a very interesting finish. The ceilings throughout are insulated against heat and cold and sound absorption. The pitched roofs are covered with hand-made clay tile and the flat roofs with asbestos material. These features, with the concrete walls, make the building practically fireproof.

A Page of

Pencil Sketches

by

Stanley Johnson

Los Angeles
California

SPAIN

A Portfolio of Camera Sketches

by Lothar C. Maurer

III. *Balconies*

HOUSE ON THE PLAZA, ECIJA

HOUSES ON THE PLAZA, TRUJILLO

CACERAS

RONDA

HOUSE ON THE PLAZA, TRUJILLO

A STUDY IN WALL SPACE

CORNER BALCONY, RONDA

THE FIREPLACE IN THE HOME

BY ELLIOTT TAYLOR

FROM the time when the cave man struck the first fire in some rocky niche to warm his body and protect himself against the ravages of prowling monsters, down to the time when the fireplace began to assume its dominating influence in the living room of the home, no single institution has held more complete sway as the key note of hospitality and good cheer as has the fireplace.

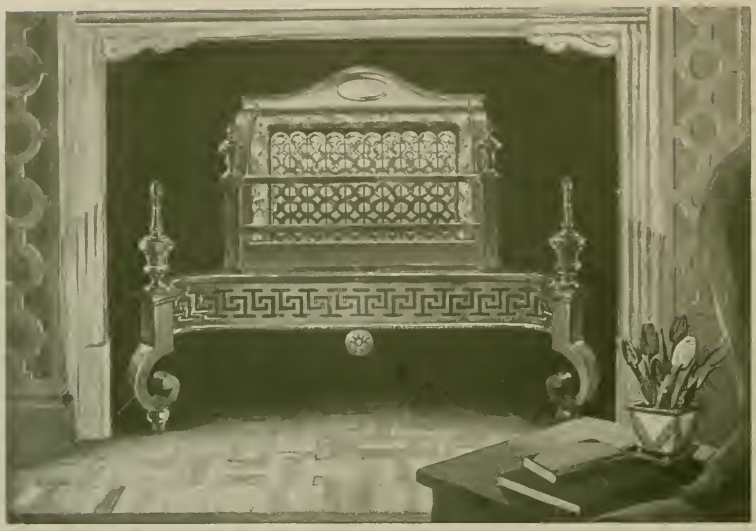
The open fire is the *sine que non* of genuine homelikeness and livableness,—it is a vital necessity to the creation of home atmosphere. The irresistible fascination in the dancing flames of a blazing fire has long been a symbolic enhancement to human gregariousness and discourse,—what can be more effectively conducive to congeniality in social gatherings than the soft, mellow glow and flickering shadows emanating from the hearth stone? The poet Cowper paints an apt picture when he sings, "Now stir the fire, and close the shutters fast, let fall the curtains, wheel the sofa around . . . so let us welcome peaceful evening in." To gather before a cheerful blaze is a primitive and fundamental instinct.

It is anything but strange, then, that with the development of architecture through the ages, and more especially, that of England and America, the fire place, symbolizing as it does the comfort of the home, should have come to warrant so much attention in home designing. There are other rooms in the house than the living room, but at the most, they serve a purely utilitarian purpose. It is in the living room that we find concentrated the greatest artistic expression in architectural design, just as it is around the living room fire that we gather for sociability and friendliness.

It is true that during a period of about fifty years in American history, we find a very noticeable decline in the position of the fireplace in the home, and this lack of regard for the traditional hearth stone must be ascribed to the advent of stoves, of hot-air furnaces, of steam heaters,—in short, of all the modern heating appliances that have so materially reduced household drudgery. Modern scientific achievements offered to eliminate from household duties the cares arising from the use of the primitive fuels of coal and wood, and it would not have been very surprising indeed if the fireplace had disappeared entirely from the home.

But such was not the case. Even after the employment of central house-heating plants, the age-old institution declined to completely abandon its functions. And in spite of the fact that it had apparently outlived its original purpose as a source of warmth, the fireplace still persisted in some semblance of its former significance. Although many existing fireplaces were bricked in and allowed to relapse into complete disuse, it is evidence of the indispensable position the fireplace had come to occupy in architectural design that it still remained, even if not utilized. Mantels continued to function as the key stone of living room design, and in many instances fireplaces were constructed without flues, so great was the realization that their extinction would leave a very noticeable vacancy in the home.

The renaissance of the fireplace did not



The scrolled Flemish legs and the characteristic architectural design of the early 17th Century styles of furnishing are caught in this fireplace heater of the Jacobean period. Its substantial, robust proportions conform exceptionally well to low-ceiled rooms.

The reign of Queen Anne left its mark on interior decorations that has lasted to the present day. The wave or cyma curve and the well-known cockle shell motifs have been incorporated in this design.

occur until a few years ago, with the introduction and perfection of gas as a fuel, and when people began to realize that even if it did not heat an entire house as capably as a stove or basement heater, there was no reason why it should not still be used as an aid. And home builders are once more regarding the fireplace as the central point toward which everything in the room tends and around which all the room furnishings must be harmonized.

No other factor has contributed more to the reinstatement of the fireplace than the development and perfection of the radiant type of gas heater, because a fireplace never used is worse than none at all, and there assuredly was a great deal to be said in support of the old-time house-wife's complaint. As far as the heat value of these new fireplace appliances is concerned, a radiant heat of an unexpected health-giving quality has been developed by extensive scientific research and experimentation. The same forces that formerly deprived the fireplace of its established functions have now provided it with an infinitely better, and as far as heat value is concerned, more effective means of performing its operations.

But utilitarianism is by far not the only consideration of the home builder, and realizing that the fireplace is the keynote in the decorative scheme of the room, the manufacturers of the radiant type of gas heater have commissioned architects and designers to produce designs which harmonize with the very finest possible decorative effects and retain their artistic value even when not in use.

This renaissance of the fireplace, so to speak, is being accompanied by a very marked consideration to a proper harmonizing of all furnishings. Beauty is being sought in its broadest and best sense through combinations which embody proportion, dignity, propriety and grace, and the designers of radiant heaters are bending every effort to the blending of solid fireplace comfort with an exquisite decorative quality that makes any room more beautiful.

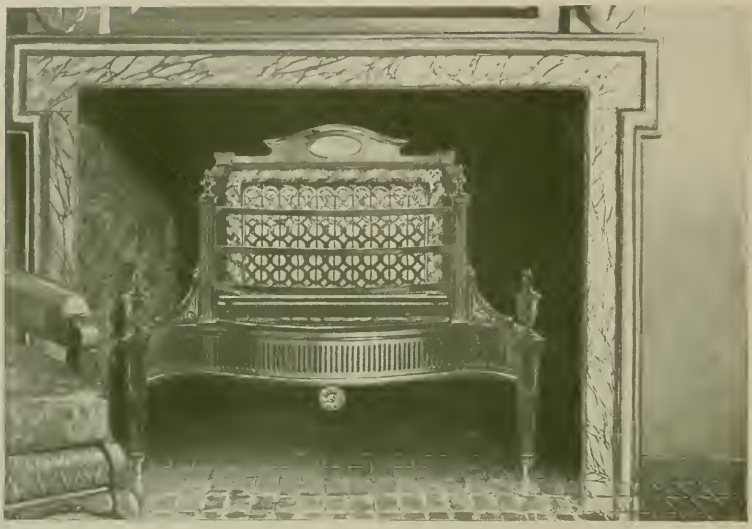
The phase of radiant heater design that is attracting the most attention of home builders at the present time is that of the period models, authentic replicas of the best English fire basket designs of the period from 1600 on. It was in these centuries that the birth and development of artistic and craftsmanlike endeavor occurred. Architectural design attained to unprecedented self expression; things were built to conform with ideals, and architecture became truly "frozen music."

A rough outline of the various periods and tendencies in furniture design will be of interest to the architect, and will at the same time acquaint him with the varied adaptability of these new fireplace heaters with home furnishings of whatever style.

The staunch, rough manners, brusque morals and robust theology of the 17th century is aptly depicted in the furniture of that period, to which the term "Jacobean" is usually applied. Characterized by straight lines and simplicity of structure, it is expressive of British virility and strength, even though many times adorned with a superfluity of ornament. Its squat proportions conformed to the prevailing low-ceiled rooms. Foreign influences effected a slight change in the latter part of the century, and a free flowing treatment of roses and acanthus and sometimes human figures along with the conventional Baroque scrolls, became the prevailing mode.

With the sturdy, wide-awake character of Queen Anne design, we are well acquainted. During this period (early part of the 18th century) there was a greater elaboration of carving than formerly, the chief motifs being the favorite and familiar shell and the C and S scrolls. Perpendicular lines were discarded, and the wave or cyma curve in every possible position is found profusely in all design of this era.

During the latter half of the 18th century, the Adam Brothers reigned supreme in the field of architectural design. Although they were not makers of furniture, their architectural prowess profoundly affected furniture design of the period. Robert Adam, the best known of the brothers, the greatest architect of his time, was a pure classicist and brought into his art a revolutionizing purity of line and distinction of



The classic art of the Brothers Adam flourished in the latter part of the 18th Century. The famous vase or knife urn was perhaps their best known embellishment. Here it is shown combined with the Greek classic influence in a radiant fireplace heater.

Another and slightly more ornamented example of the Adams Brothers' influence on fireplace design, with the characteristic Adam vase and the slender, graceful legs typical of all this justly famous furniture.

character. So great was his impress upon the art and architecture of his time that it became and is still known as the Adam Period.

Adam furniture is light and graceful. It imparts a feeling of admirable restraint and dignity and its straight structural line gives a contour of beauty and satisfying proportion. Classic ornamentation was used freely, but the outstanding and best known embellishment was the characteristic Adam vase or urn. Their avowed purpose was to appropriate "the beautiful spirit of antiquity," transfer "it with novelty and variety through all" and distinguish their design by the "clever selection and application of cultured ornament." As would naturally follow from the fact that Robert Adam derived his inspiration from ancient Greece and the best of Roman Art, the outstanding characteristics of his creations are complete symmetry, the beauty of straight lines, the artistic use of medallions, a light and airyness of design, with-all portraying the impression of Greek strength.

Toward the close of the 18th century, the magnificence of artistic ability, under the generous patronage of the two French monarchs, Louis XV and Louis XVI, was newly awakening in France. Louis XV greatly encouraged artists and craftsmen and they in turn worked diligently for his kingly favor. To satisfy a demand for softness and ease, the designs of that period created furniture which has never been surpassed for sheer beauty and sumptuous charm. All the lines were curved and flowing, all surfaces profusely decorated in an artistic combination of rock and shell motifs, generally known as rococo. So pronounced was the use of this form of ornamentation that the style of Louis XV is usually referred to as the "rococo period." Where a rich and luxurious effect is desired, Louis XV furniture will provide it.

The furniture of Louis XVI, or more properly, of Marie Antoinette (for it was to her favor that artists and craftsmen of the day strove) was a distinct reversion to the classical influence which appears in the Adam designs. Curved lines and the cabriole leg changed to the straight line. There was a return of classic motifs and feelings. The style was dainty, graceful, elegant and yet home-like. Where curves were used, they were long and slender. The characteristic legs of the period were straight and tapered, usually fluted, sometimes carved. The ornamentation was of garlands, lovebirds, wreaths, baskets of flowers, rope carvings and many other pretty naturalistic things. The rosette, festoons of ribbons, flaming torches, fluted columns, lyres and urns were prominent.

In replicating the architectural styles of the periods enumerated, the designers of radiant fireplace heaters have had little difficulty in reproducing them in authenticity, but in American Colonial furniture, they found a mixture of practically all the English periods and many Dutch forms, not to mention the marked sentiment toward French ideals that came through Lafayette. Colonial heaters, however, are modeled after a design which shows the English influence of Heppelwhite and Sheraton. Colonial styles were plainer and often sturdier than the foreign models from which they were taken. There was little of the complex or fanciful, but they were durable with a splendid freedom of line.

In adapting these period styles to radiant fireplace heaters, the designers have succeeded in retaining all the characteristic beauty of each period. Whatever the architectural or decorative plan of the modern house and furnishings, — whether it conforms to the sturdy lines of the early English, the gorgeous color of Queen Anne, the classic restraint of the Adam period, the sumptuous richness of Louis XV, the charming delicacy of Louis XVI, the dignified simplicity of the American Colonial period, or the intriguing designs of modern art, radiant gas heaters have been made to harmonize with and enhance its beauty.

By virtue of their comfort and health-giving qualities, inherent beauty and simplicity of operation, with their entire elimination of disagreeable drudgery, radiant gas heaters have contributed no small part to the restoration of that traditional institution of cheer, the fireplace, to its former position of respect in the home.

The rococo period of Louis XV gave way to a return to classic simplicity in line that marks the Louis XVI furnishings. The exquisite simplicity of line, with the typical horizontal bands, rectangular spaces and classic emblems are all faithfully reproduced.

Perhaps one of the most adaptable of all periods is that known as the American Colonial. Our own pioneer furniture makers, patterning their work after pieces from England and France, achieved a style of their own.

PROFESSIONAL ADVERTISING

BY L. G. SCHERER, Architect

DURING the past year every architectural publication has given space to articles dealing with the question of advertising for the architectural profession. Many progressive architects have contributed thoughts along this line. Some good, sound, sane arguments have been advanced. As yet, little has been done to organize and effect a campaign to further advance the subject. When will the architects shake themselves free of the negative, indifferent attitude which has been but an obstruction to the effectiveness and scope of their services? The question is a deeply serious one—it must be faced honestly and resolutely. To evade it longer is to continue to refuse scientific treatment to a malady that is slowly but surely undermining the public's conception of what the profession actually is.

The treatises which have thus far appeared have been very good advertising for the architects themselves. In many quarters the arguments have awakened the architect to a realization of the necessity of such a campaign. It has been a good advertising program, but as yet, has not created sufficient response. Eventually it will—but we cannot wait too long. The architect must be sold on the absolute necessity of organizing and furthering a scientific, educational campaign. The economic, as well as the esthetic importance of his profession, must be brought to the close attention of the public. To continue along our traditional course of modesty, aloofness and indifference is to do nothing but thwart the profession's growth and usefulness.

When the American Institute of Architects first opposed the use of advertising to promote business, advertising was looked upon with disdain because it was an infant business, polluted with a considerable quantity of dishonesty and misleading copy. At the beginning it was used principally as a means to sell questionable products. Since then conditions have changed—the business of advertising has become a profession, a profession of high standing and merit. It has become the greatest civilizing influence in the world today. Its intrinsic value has greatly improved conditions under which we live. What would be the condition of society today if advertising had not sold the automobile, the radio, and the thousand and one household conveniences which have bettered the lives of mankind? It can be safely stated that the amelioration of living conditions, both domestic and commercial, during the last half century, is to a large extent due to the effect advertising has had in moulding public opinion. It has changed the economic status of at least one fourth of our people by improving their living conditions — it has raised them to higher standards. Yes, it has done more than that — it has made this world a better place to live in, because through it, the public has learned to demand the finer things of life.

In the past the architectural profession has not been hesitant to receive publicity, which is merely a form of advertising, possibly a change in degree and not in kind, whether paid or unpaid. I am firmly convinced that the profession of architecture has no right to withhold its real story, its economic value and esthetic importance from the public. There is no profession so intimately interwoven into the lives of humanity as architecture. It is no longer a matter of concern to the few. It has such vast possibilities that the public is entitled to know something about it. There is something anomalous about a profession so necessary, so vital, so intimately associated with our daily lives, and which depends so much upon public consciousness for its growth and usefulness, not availing itself of means to create public opinion. What fascinating stories can be told about architec-

ture! It possesses an extraordinary array of material which would become of deep interest to everyone. It is all good stuff going to waste. Architecture as a profession must become cognizant of its possibilities and tell its story—it is not a passing obligation but a definite duty. Silence and indifference have deprived us of a complete expression of our profession. People talk about golf, baseball, aviation and other sports because they have been made interesting through publicity. They are talked about because they have been brought to our attention and we are compelled to take account of them. We must have timely subjects to discuss and the only reason we talk about prize fights, baseball, halitosis and what not, is because of publicity. Even our great educators recognize the tremendous educational value of advertising in their psychological tests. A student's knowledge of current life is determined by questions dealing with advertised products. People would talk more about architecture, the romance of the skyscraper, and the home, if we would only tell them something interesting and instructive about them.

The advertising campaigns that have done most to improve conditions have been the collective educational campaigns of groups of similar businesses—such as the "Save the Surface" campaign, which not only created more business for the paint manufacturers, but did a great deal to improve the beauty of our communities.. The slogan worked both ways for the benefit of all concerned. That is intelligent advertising. This same principal applies to a host of other cooperative advertising campaigns. The purpose of group advertising is not to sell the manufacturer of one unit in its group, but to educate the public to the value of what they collectively have to offer. Such advertising is unselfish, altruistic, dedicated to the common good. It is a benefit to the public as a whole and contributes to the sum of human happiness.

With those architects who have been of the opinion that advertising would tend to depreciate the status of their profession, I beg to differ. They are either indifferent or totally ignorant of the place which advertising holds in the modern scheme of things. Theirs is a regretful misconception. Advertising establishes greater public contact, which means greater responsibility. Its effect is conducive to the raising of the standards of business. By making the public more architecturally minded, its taste will improve, it will become more critical. The architect cannot fail to realize the force of this responsibility—he must live up to his promises. The startling fact about advertising is that it *does* fundamentally change the character of business. The history of the leading manufacturers, and we must look to them as they are the great advertisers, is proof conclusive that the power of advertising is a great democratic force—it has raised the quality of goods. In creating public confidence, it has been necessary to maintain it. It has done more to crystalize the idea of business than spoken words. We are entering the field of advertising at a time when it has thrown off the scars of the past. Today it is desirable, honest and uplifting. Through censorship by the leading periodicals, the public is protected from quackery.

The great lesson learned in advertising is that of cooperation—of the organization of interests. By bringing the architects together in a common cause we establish confidence, respect and honor among them. Charles Lamb once said "I hate that man." When reminded that he did not know him, he answered, "Of course, I don't — how could I hate him if I knew him." In a milder sense this attitude very often feels itself expressed in our professional behavior, and the reason is that we do not know each other. Any campaign that will bring the architects together is highly desirable. I have often thought how ideal it would be if we could have something of an architectural clinic where one could honestly get a criticism of his problems before he put them finally on paper. Good fellowship and the understanding of each other's problems

some day will bring this to a realization. A cooperative educational campaign may be a stepping stone.

Much has been written about this question—the value of advertising—and gradually we are beginning to feel the necessity for it. A few attempts have been made to further it, such as the slogan "Employ an Architect," used by some of the manufacturers. Unfortunately, most of this propaganda appears in our own periodicals and does not get outside of our own offices. Our publicity must be intelligently directed. It must be addressed to and circulated among the public. It is patent that when a man spends a good sum in advertising he is usually granted, if requested, considerable space for a publicity story. This opportunity is seldom taken advantage of. When one considers the millions of dollars spent annually in the United States by the manufacturers of building materials in every type of publication, and the very small amount of attendant publicity dealing with the question of these materials in architecture, one realizes the potential possibilities of a tremendous educational campaign which is going to waste. Beyond a doubt, if the architectural profession establishes an organization to contact these many advertisers, publicity stories could be gotten into every periodical in the country. The material manufacturers should cooperate with the architects in a program of this kind.

At the present time the most important phase of an educational campaign should be built upon the economic necessity of architectural service. The public must learn to look to the architect rather than the builder for advice. In an overwhelming majority of instances (and I have heard of but two exceptions) the client's interest is basically economical. What you have got to prove to him is this—that our services are not an unnecessary expense but a decided economy. There are a thousand instances wherein better architecture has greatly increased the value of property, wherein a building has been built at less cost because of the architect's services. Most men in the profession know that when the Aeolian Hall was auctioned off in New York, the fact that it had been awarded the Fifth Avenue Association Gold Medal as the most artistic building erected in 1926, greatly increased the price which it brought. Yet, how much publicity was given in this particular instance. It was good advertising meat gone bad. To repeat, our fundamental problem is to sell the economic side of our services. Having achieved this, the esthetic will take care of itself. Though beauty is a very important force in modern civilization, the average man is more interested in costs. Once we educate him as to this phase of architectural service, it will be less difficult to obtain greater fees and more consideration from him, which will enable us to create better architecture. This must be done cooperatively, and it will in no wise diminish the spirit of competition existing between us but will make it more intelligent, fruitful and beneficial. It will become a gentleman's game of competition—like golf, perhaps. Each man plays his ball as best he can and when a tee plants him in the rough, the others will willingly join in the search.

This program is inherently the young man's work—the enthusiasm of his youth, his faith, courage, his vision and imagination, will go farther than experience. He is the product of the present generation and more readily responds to the pulse of the present tempo. There is a tremendous untilled field lying before us. Its potential possibilities baffle the imagination. The profession of architecture, considered in all its phases, is probably one of the most important in the present civilization. What are we going to do about it? Shall we create an atmosphere favorable to it, or continue trudging along in the last century petticoat of ethics which retard our movements—as the rest of the world goes by.

PRELIMINARY STUDY OF POSSIBLE CIVIC CENTER, OAKLAND, CALIFORNIA

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PLANNING A CIVIC CENTER

BY JULIAN C. MESIC

THE Society of Architects of Alameda County, responding to their public responsibility, are visualizing the civic needs of a possible million people in the city of Oakland. In the absence of City Planning Commission funds the Society offered its services and a special committee has devoted considerable time and study to this problem. The final result is a model in full color at a scale of 300 feet to the inch, portraying the character of the outstanding features of the environs of Lake Merritt and the city, south to the Estuary. This has been presented for examination to the City Planning Commission.

Aside from the responsibility of Oakland's home, cultural and commercial site, its problem is increased by its blessing, Lake Merritt, covering a hundred and sixty acres in the heart of the city, and breaking the continuity of many streets from the growing business center to the east, fast becoming the center of population.

The immensity of the project impresses itself when one remembers that one of the finest civic centers in the country, (San Francisco) covers about fifteen acres, while this plan for Oakland covers one hundred seventy acres, exclusive of Lake Merritt and Park and Lakeside Park. About half of this area is now city owned and the balance is comparatively cheap land. Liberties have been taken with both public and private holdings to show the possibilities rather than the advised plan, in the hope that inspiration might be given for a comprehensive study by persons empowered by the City Council and financed by public or private funds for a thorough investigation of the problems.

The desire for an easily understood presentation caused the selection of the writer to render the plans in a model which the Society has copyrighted only to the end that public information may be correct.

Daniel H. Burnham's admonition relative to Chicago, "Make no little plans; they have no magic to stir men's blood and probably themselves will not be realized," comes forcefully to mind. C. Mulford Robinson's 1906 report on Oakland, when San Francisco lay in ruins, is a definite reminder of the lack of fulfillment of a smaller plan, no less urgent. The impossibility of obtaining sufficient land about the present city hall should be a warning to Oakland to act now before it is again too late.

The architects briefly describe their suggested plan as follows:

"(1) The development of a group of public buildings with the auditorium as the central motif along the broad esplanade, or mall, extending East from the new post office site to Third Avenue, terminated by important public buildings, flanked by others of public or semi-public nature.

"(2) The development of Peralta Park and other lands South of the auditorium to Fourth Street, by the construction of an exposition building and accessory structures linked by bleachers for the spectators attending exhibitions. The lower portion of this area is devoted to a horticultural building, together with park and recreational qualities.

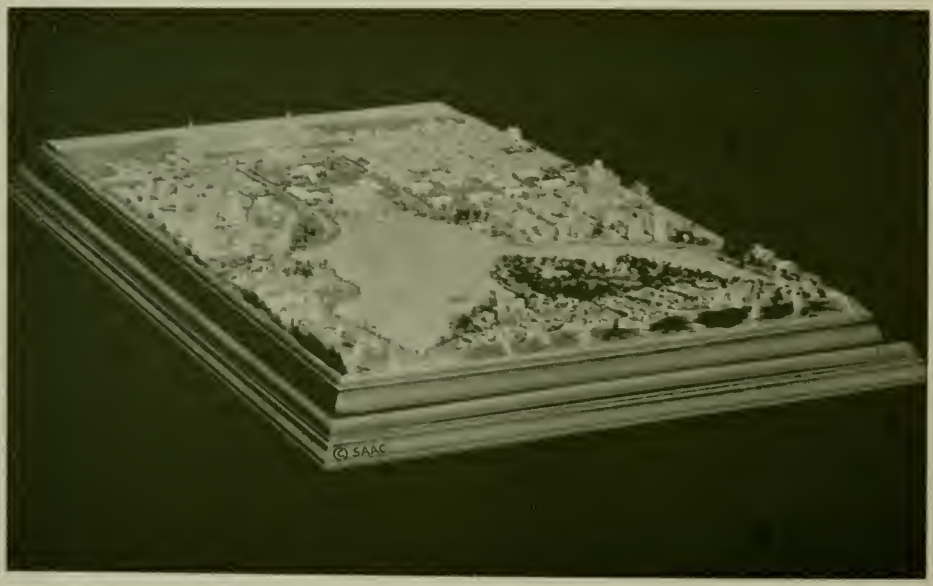
"(3) The development of that area between Fourth and First Streets for a union passenger station; from where visitors would gain a most attractive first impression of the city.

"(4) The development of a yacht harbor on the present arm of the Estuary

MODEL OF PROPOSED CIVIC CENTER, OAKLAND, CALIFORNIA

which could be developed to receive and dispatch a limited number of hydroplanes and air ships."

Surely material for a monumental plan worthy of a great city and its citizens, present and future!

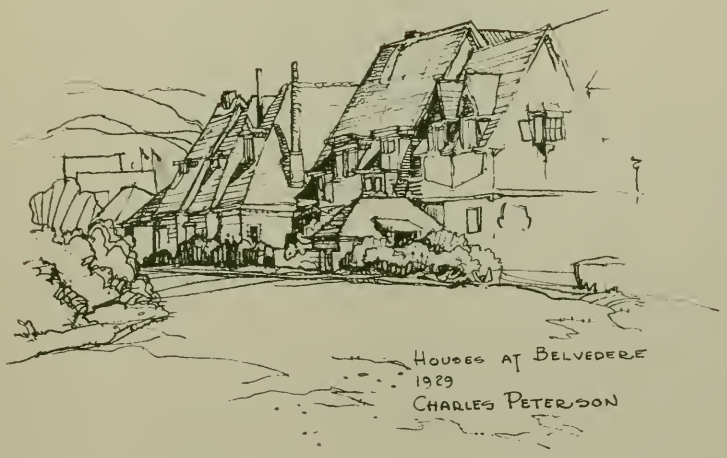


MODEL OF PROPOSED CIVIC CENTER, OAKLAND, CALIFORNIA

PEN SKETCHES

by

CHARLES E. PETERSON
U. S. National Park Service



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SAN FRANCISCO
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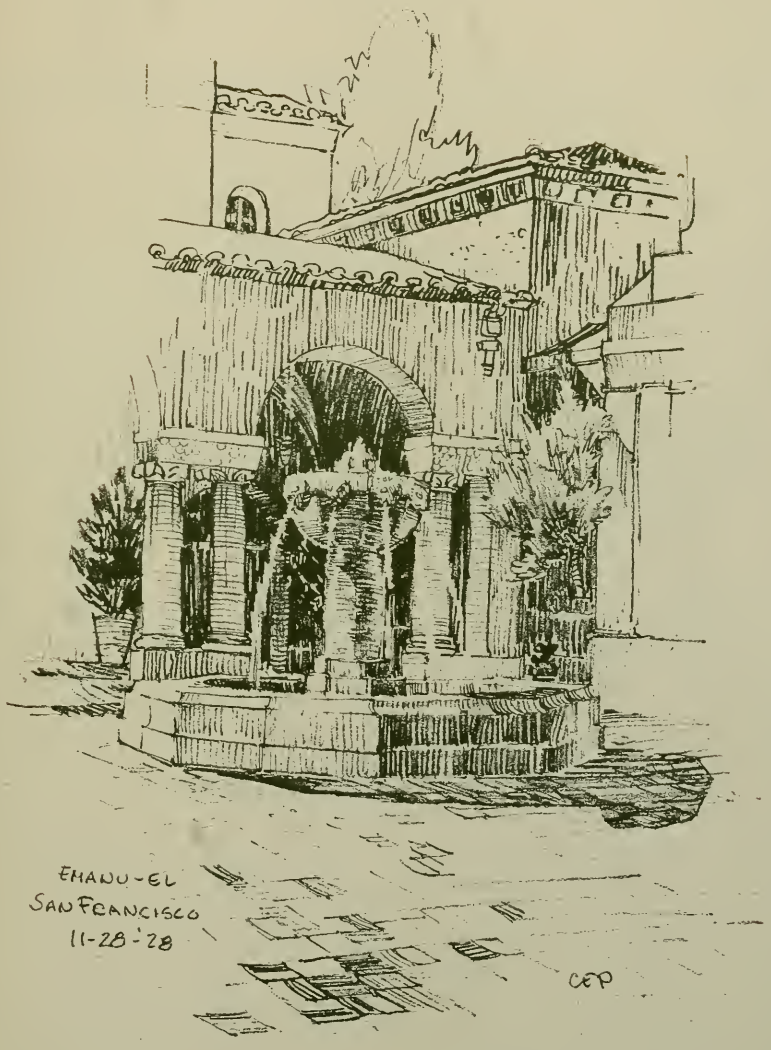
JUAREZ, MEX.
MAY 1930

HOT SPRINGS
ARMY & NAVY HOSPITAL
IV-18-30
CHARLES E PETERSON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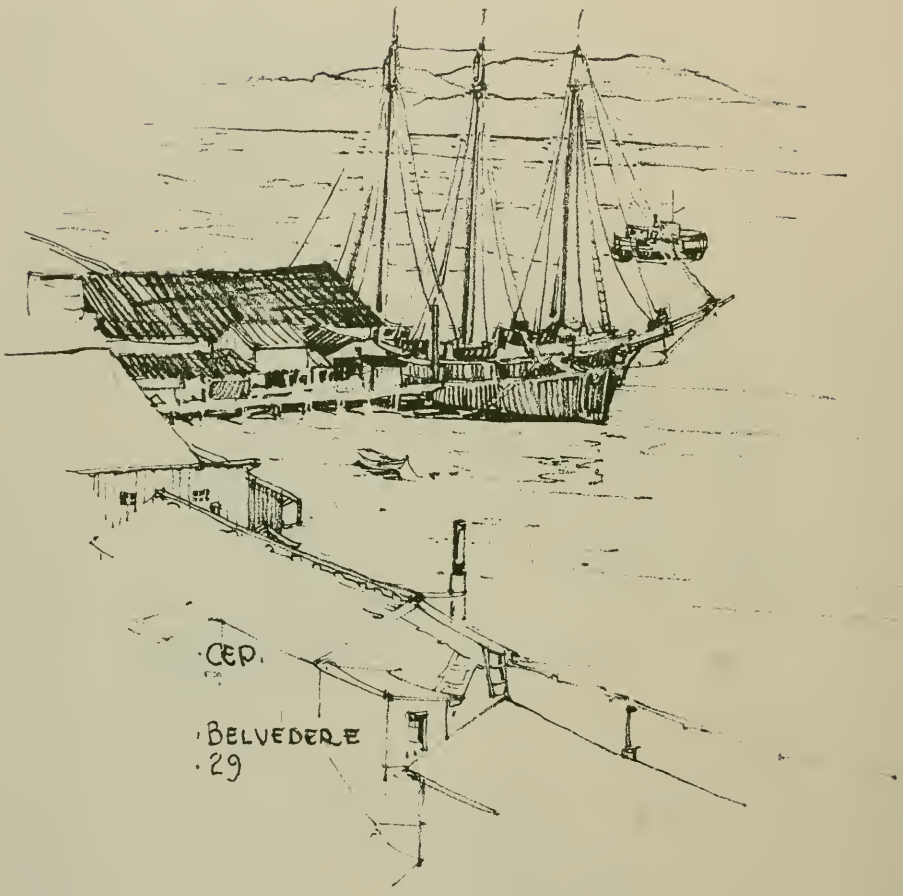
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COMPETITION for CONGREGATIONAL CHURCH

SAN MATEO, CALIFORNIA

AN architectural competition was recently held in San Francisco for a Congregational church at San Mateo, California. There were three entrants—Messrs. Kent and Haas, J. K. Ballantine of San Francisco and W. C. F. Gillam of Burlingame. Three other architects were invited to compete but declined. These were Henry H. Gutterson, San Francisco; E. L. Norberg, San Mateo; and John H. Thomas, Berkeley. The successful firm is Kent & Haas whose design is shown herewith. The jury of award was composed of Lewis P. Hobart, Warren Perry, both architects, and J. C. Whitman and E. A. Long, representing the church. Ernest Coxhead acted as architectural adviser.

The program with reference to the building requirements, was as follows:

BUILDING REQUIREMENTS

1. *General*:

(a) The essential requirements of the building units are described in the following paragraphs. The essential requirements noted as not Mandatory shall be complied with as nearly as possible by the Competitors, but shall be governed by the Mandatory requirement of cost.

(b) All designs must conform to all State and local laws applicable and to the requirements of the National Board of Fire Underwriters.

2. *Requirements of Drawings*:

(a) It is Mandatory that each Competitor submit drawings for one scheme only.

(b) It is Mandatory that the following drawings be submitted and no others:

(1) Plan of site showing existing building and proposed new building, scale 1/16-in. to one foot.

(2) First floor plan showing proposed new building, including the seating, choir, organ and pulpit arrangement, etc., and the existing building eastward at least to a line parallel to San Mateo drive through the mid point of the existing patio, also the proposed landscaping of this section, Scale ⅛-in.;

(3) Elevations of east, west and south fronts, the latter to extend from San Mateo Drive to mid point of existing patio, Scale ⅛-in.;

(4) Transverse section of church auditorium looking toward chancel, Scale ⅛-in.;

(5) Longitudinal section through church auditorium, Scale ⅛-in.;

(c) It is mandatory:

(1) That all drawings be mounted either collectively or individually on 30″x40″ standard white board, such as "Strathmore" or mounted Whatman;

(2) That all drawings be rendered in pencil on white tracing paper with black pencil, without color and with plain block lettering;

(3) That elevations have no foreground or background and that shadows be cast from left at an angle of 45°;

(4) That floor plans have walls and solids outlined with heavy lines and filled in with lead pencil;

(5) That sectional drawings have sections of solids outlined with heavy lines and filled in with lead pencil.

3. *Data on Existing Plant*:

(a) The attached drawings indicate the church property and the existing plant. Each Competitor should visit the site, however, in order to satisfy himself of their accuracy.

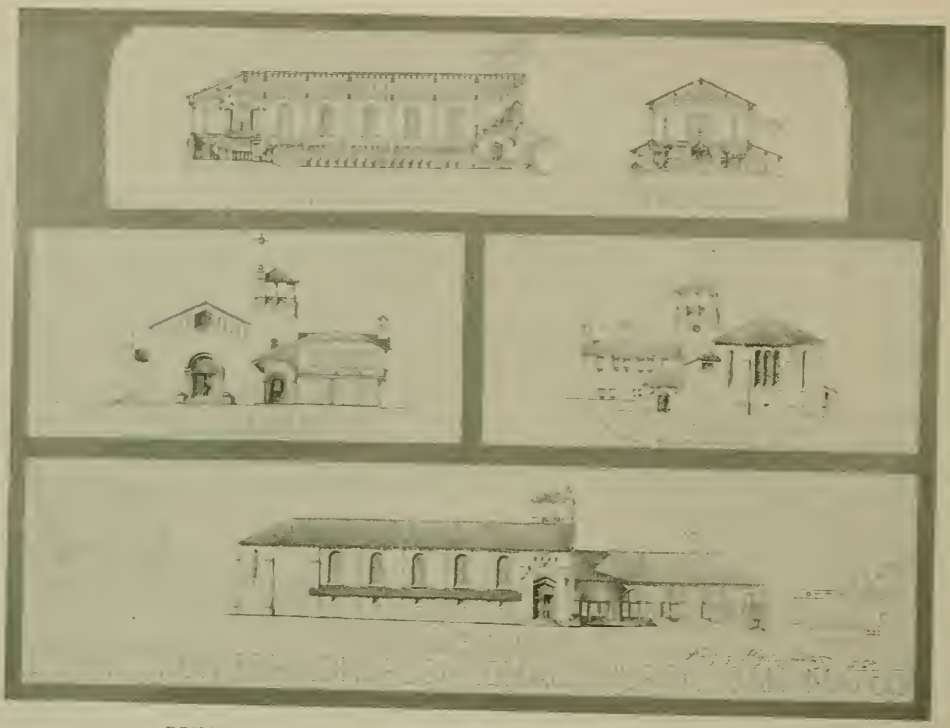
(b) The existing organ will be moved to the new building and provision shall be made for it on the plans of the proposed building.

4. *Cost*:

It is mandatory:

(a) That for the purposes of this competition the cost of the new building, including additions to present building, be figured at 27 cents per cubic foot and that the total cost figured on this basis, plus a sum to be allowed for landscaping and which shall be indicated by each Competitor, plus a sum to be allowed for altering the existing building should the Competitor wish to do this and which also shall be indicated, shall not exceed $41,500.00. This figure, however, shall not include the architect's fee.

(b) That cubage be computed to show as exactly as possible the actual volume of the building, calculated from the grade of lot to the peak of the roofs, and contained within the outside surfaces of the walls. Pilasters, cornices, balconies and other similar projections shall not be included. Porticos with engaged columns and similar projections shall be taken as solids and figured to the outer face of the columns. When columns are free standing one-half of the volume of the porticos shall be taken. There shall



DESIGN FOR CONGREGATIONAL CHURCH, SAN MATEO, CALIFORNIA
Kent and Haas, Architects

also be included in the cubage the actual volume of all parapets, towers, lanterns, dormers, vaults, and other features adding to the bulk of the building, also the actual volume of exterior steps above grade.

(c) That a figured diagram showing method of cubing accompany the drawings.

5. *General Building Layout*:

(a) It is mandatory:

(1) That existing building now used for church purposes shall remain and the new building shall be properly joined to it except that the existing Pastor's Study may be torn out and rebuilt, if desired.

(2) That the existing parsonage be removed.

(3) That the completed group be architecturally harmonious but it is optional whether the new building blend architecturally with the existing building or the existing building be sufficiently altered to blend with the new unit;

(4) That the unoccupied portions of the lot be landscaped;

(5) That suitable toilet facilities be provided for the new building unit.

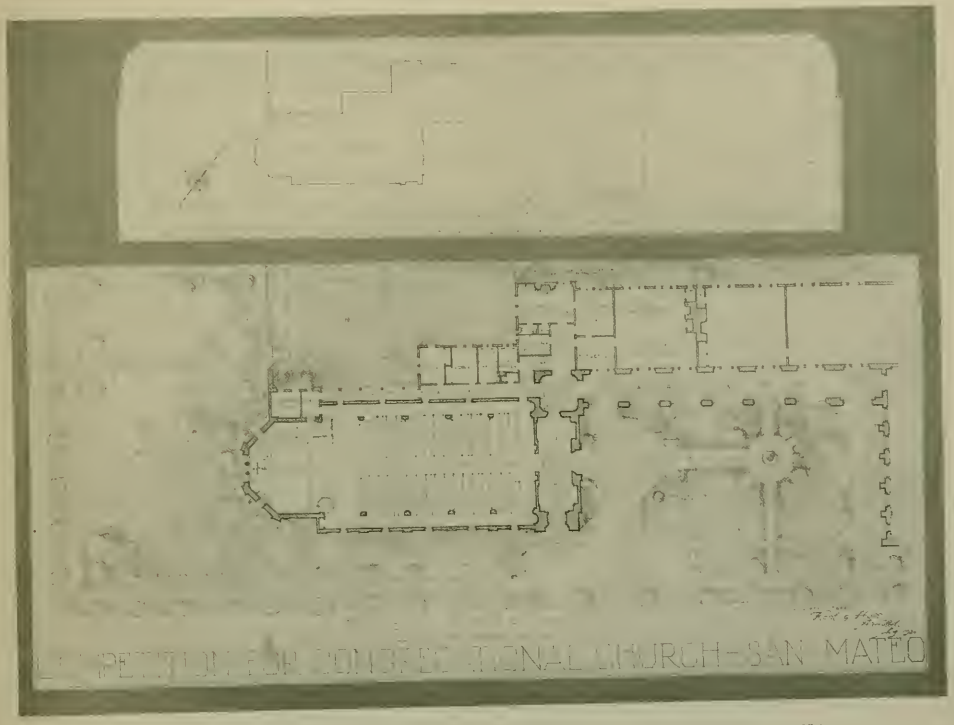
(b) It is not mandatory, but preferred:

(1) That the existing fir tree on the lot be retained.

(2) That the existing basket ball court be retained.

(c) The following are optional:

(1) Orientation and location of new



PLANS, DESIGN FOR CONGREGATIONAL CHURCH, SAN MATEO, CALIFORNIA
Kent and Haas, Architects

building with respect to existing building.

(2) The presence or absence of a tower.

6. *Main Church Auditorium*:

(a) It is mandatory:

(1) That provision be made on the main floor of the church for at least 300 sittings with pews spaced 36 in. back to back, with 18 in. in width allowed for each person, with a center aisle minimum width of 6 ft. and a side aisle minimum width of 4 ft.;

(2) That a gallery be provided for not less than 50 persons for use on special occasions (larger seating capacity is desired but is not mandatory);

(3) That the altar be placed in the center of the chancel;

(4) That the pulpit be placed to one side;

(5) That choir space for 20 persons in one body be provided, not in the rear of the chancel;

(6) That space be provided for the organ console not in the rear of the chancel;

(7) That provision be made for grilles for a hot air recirculating heating and ventilating system;

(8) That special thought be given to the acoustics of the auditorium in order that they may be as nearly perfect as possible;

(9) That special thought be given to the lighting of the auditorium to the end that the light be as free from glare as possible.

(b) It is not mandatory but preferred that each of the 350 seats have a full view of the altar and pulpit.

(c) It is not mandatory but preferred that generous space be provided both in the lobby and outside the church adjacent to the main entrance for social intercourse before and after services.

7. *Sunday School Rooms*:

(a) It is mandatory:

(1) That at least 650 sq. ft. of additional space be provided for the Kindergarten Department in one room, equipped with movable partitions so as to be divisable into seven class rooms of approximately equal size;

(2) That at least 750 sq. ft. of additional space be provided for the Intermediate Department in one room equipped with movable partitions so as to be divisable into six class rooms of approximately equal size;

(3) That at least 120 sq. ft. be provided for a Sunday School Secretary's office.

(4) That at least 60 sq. ft. be provided for a Sunday School Supply room.

(b) It is optional whether the additional space in Paragraphs 7 and 8 be provided through a second story over the existing Ladies Aid and Primary Rooms or in a new section.

8. *Pastor's Study and Church Office*:

It is mandatory:

(a) That a Pastor's Study of at least 200 sq. ft. equipped with an adjacent lavatory and toilet be provided;

(b) That a church general office of at least 150 sq. ft. adjacent to the Pastor's Study be provided;

9. *Choir Robing Room*:

It is mandatory that suitable choir robing rooms be provided for men and women separately, each complete with lockers.

10. *Auxiliary Space*:

It is mandatory:

(a) That space be provided for the necessary pipe organ equipment;

(b) That space be provided for heating and ventilating equipment for the new unit. It is possible that the new plant can use a part of the space occupied by the existing furnace unit.

ENGINEERING

and

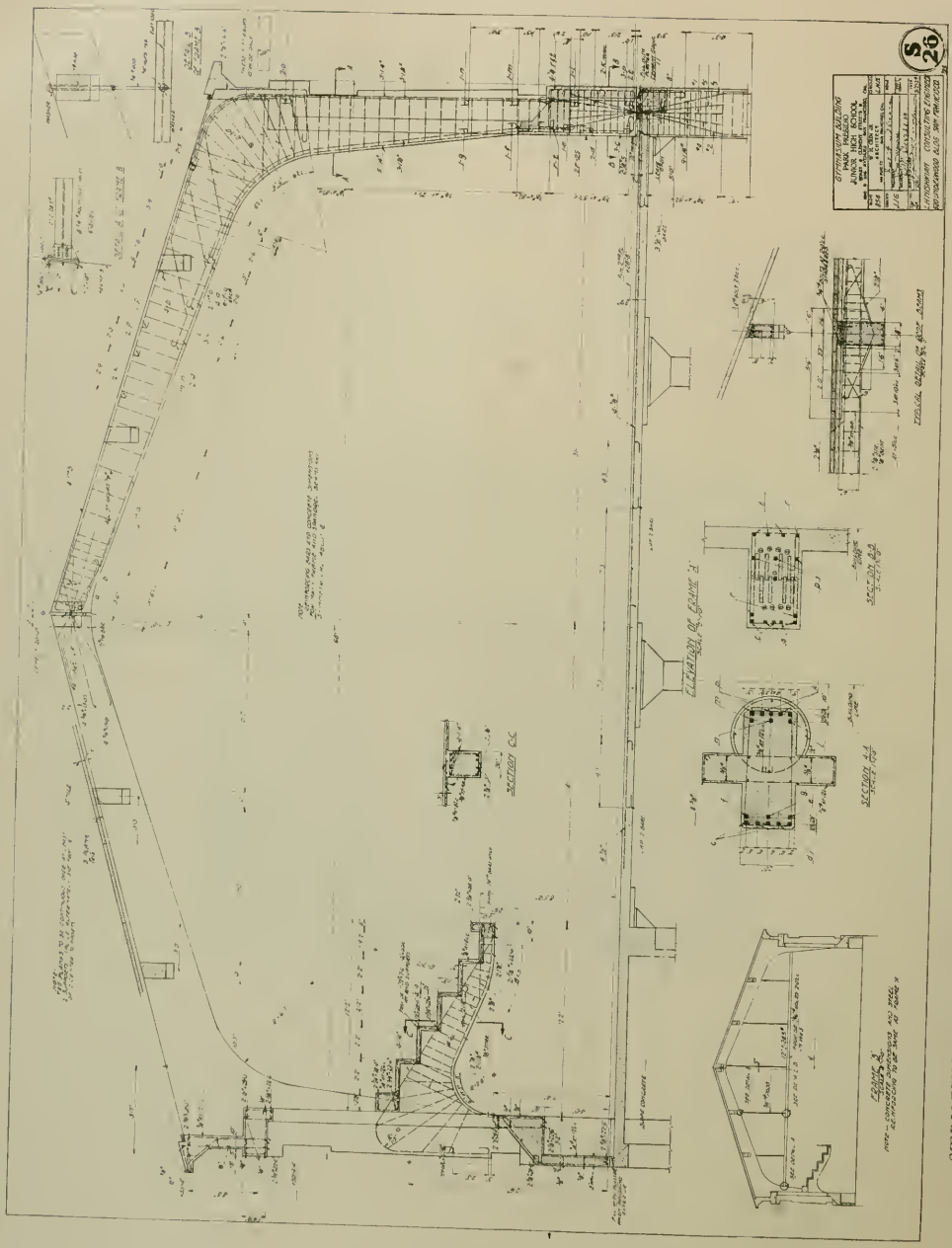
CONSTRUCTION

CONCRETE ARCH FRAMING OVER GYMNASIUM
L. H. Nishkian, Structural Engineer

Featuring

The Structural Design of Park Presidio High School, San Francisco

The ARCHITECT AND ENGINEER



STRUCTURAL DETAILS, GYMNASIUM BUILDING, PARK PRESIDIO HIGH SCHOOL, SAN FRANCISCO

L. H. NISHKIAN, C. E.

STRUCTURAL FEATURES of the PARK-PRESIDIO HIGH SCHOOL, SAN FRANCISCO

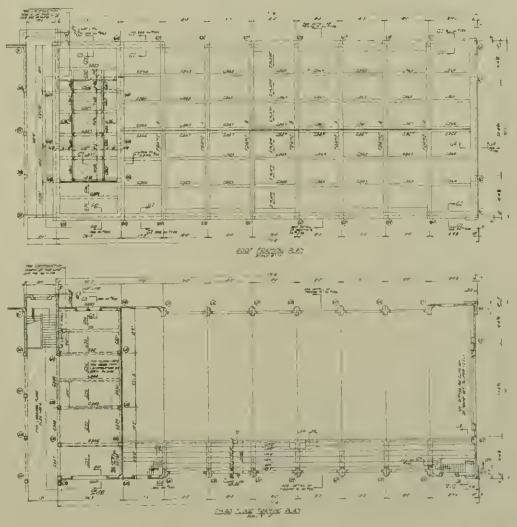
BY JOHN J. GOULD, S. E.

THE building of the Park Presidio Junior High School just completed by the Board of Education of the City of San Francisco, forms one of the major projects of the city school building program. The school is destined to accommodate 1600 pupils in the Richmond district. The various units, consisting of an administration building, assembly hall, shop and gymnasium, are bounded by 29th and 30th Avenues, Geary and Clement Streets. The total useful building area is 138,000 square feet.

The cost of the buildings, play yards and retaining walls was $780,000.

The buildings, with the exception of the roof over the assembly hall and gymnasium, are of reinforced concrete and fire-proofed steel frame construction.

The administration building is three stories high and of reinforced concrete. The building was designed as a complete elastic frame, i.e., beams and columns are considered as one monolithic unit. This resulted in a building more economical and far more efficient in case of an earthquake, than if designed according to older conceptions where the columns did not resist any bending moments due to vertical loads.



PLANS FOR ROOF FRAMING, PARK PRESIDIO HIGH SCHOOL
L. H. Nishkian, C. E.

The assembly hall frame, including balcony, are of structural steel and fire-proofed. The roof consists of steel trusses supporting a solid wooden plank covered with tile.

The shop building, four stories high, is of a reinforced concrete flat slab design.

While for the above mentioned units generally customary types of framing were used, the gymnasium offered a wider op-

portunity of a close cooperation between the architect and engineer. The gymnasium is a two story reinforced concrete building 69′ wide and 145′ long. The second floor is of the flat slab type of construction.

The roof above the second, or gymnasium floor, is framed by means of three hinged reinforced concrete arches. The arches have a span of 69′0″ and occur every steel trusses were assumed to be fireproof.

Details of the concrete arches are shown on the various photographs and photostats. The horizontal and vertical pipes shown under the arches in the picture of the interior of the gymnasium have no structural function; they serve as apparatus supports only. In order to insure as near as possible the action of a three hinged arch, a joint

DETAIL, REINFORCING AT CENTER JOINT, PARK PRESIDIO GYMNASIUM
L. H. Nishkian, Structural Engineer

18′0″. They support reinforced concrete beams on which a 3″ planking and tile roof rests. The balcony is also supported by means of reinforced concrete cantilever beams from these arches.

In selecting reinforced concrete as a main support for the roof, the principal argument in its favor was a pleasing interior appearance and additional clearance.

A preliminary study of comparative costs between a steel frame and a concrete frame showed a difference of 1/10 of one cent per square foot in favor of steel. This difference, however, changed in favor of reinforced concrete arches if the structural was left in the exterior walls along the bottom hinge until all the concrete walls were poured and the roof tiles set. This joint was then filled with cement mortar.

The architects of the Presidio Junior High School were the late W. H. Crim, Jr., E. J. Resing and J. F. M'Guinness. The writer was in charge, under the direction of L. H. Nishkian, consulting engineer of the structural design. Messrs. E. L. Merwin and A. M. Nishkian were assistant structural engineers. The contractors were Meyer Bros., and the Pacific Coast Steel Company furnished and placed the reinforcing steel.

REPRESENTS THE PROFESSION

President Hoover has appointed William Stanley Parker of Boston as a member of the Planning Committee of the White House Conference on Home Building and Home Ownership. Mr. Parker will represent the American Institute of Architects and the architectural profession.

The Planning Committee, composed of representatives of the leading national groups interested in this field, will hold its first meeting during the latter part of September, under the chairmanship of Secretary Lamont of the Department of Commerce, President Hoover said in a letter to Robert D. Kohn of New York, president of the Institute, announcing Mr. Parker's appointment.

Secretary Lamont and Dr. John M. Gries, executive secretary of the Committee, have made preliminary investigations which should be helpful to the Committee at its first session, President Hoover added.

Mr. Parker has long been prominent in the public service activities of organized architecture. He is a life member of the Institute, of which he has been a Fellow since 1916.

He was born in Boston, October 28, 1877, and was graduated from the Architectural Department of Harvard in 1899. Since 1902 he has practiced architecture in Boston, where he is associated with R. Clipston Sturgis.

Mr. Parker was secretary of the Boston Architectural Club from 1904 to 1912, and secretary of the American Institute of Architects from 1916 to 1923. He has been president of the Boston Building Congress since its organization in 1921, and director of the Architects Small House Service Bureau since 1926.

Mr. Parker was recently elected president of the Architects Small House Service Bureau, which is affiliated with the Institute, and of the Boston Society of Architects. He was instrumental in organizing the New England division of this Bureau, and in developing its co-operation with the loaning agencies of Massachusetts.

Formation of the White House Conference was a result of President Hoover's decision "to undertake the organization of an adequate investigation and study on a nationwide scale of the problems presented in home ownership and home building, with the view to the development of a better understanding of the questions involved and the hope of inspiring better

GYMNASIUM, PARK PRESIDIO HIGH SCHOOL, SAN FRANCISCO
Wm. H. Crim, Jr., E. J. Resing and J. F. M'Guiness, Architects

The ARCHITECT'S VIEWPOINT

¶ *Modernism and the A. I. A. Convention.*

¶ *Modernism and its Current Application.*

¶ *No Money.*

CONTRIBUTING EDITORS
WILLIAM C. HAYS . . *San Francisco*
CARLETON M. WINSLOW . *Los Angeles*
HAROLD W. DOTY . . . *Portland, Ore.*
CHARLES H. ALDEN . . *Seattle, Wash.*

THE recent Convention of the American Institute of Architects appeared to inspire the view point of at least two contributors to these columns. This Convention is always stimulating and gives a re-vivifying outlook to architects who have the privilege of attending this meeting with their professional workers or thinkers, assembled from all parts of the country. Mr. Winslow gives impressions of what he sees on his journey, with the Convention in prospect and mind attuned to what is about to happen. Mr. Hays gives his impressions after the Convention is concluded, the viewpoint of an actual participant.

In spite of the program's announcement that no single subject would be stressed, it was inevitable that so-called "Modernism" would take a prominent position. It did take a prominent position, engaging the attention of the Convention as soon as the usual opening addresses were concluded, and holding the attention until the late afternoon adjournment. To the present contributor to these columns, denied the privilege of attending this "Symposium of Contemporary Architecture," as it was termed on the program, some sympathy was felt for Dr. Walker, the conservative champion, with his wondering "What the commotion is all about". Modernism in architecture has always been with us. It must be that Modern "function" has now reached a point where it conspicuously interferes with conventional "form".

This reference to the Convention and "Modernism" recalls to the writer pleasant memories of former Conventions which he happened to attend, with the enjoyable and stimulating personal contacts with other participants, a valuable feature of these notable occasions. It was at a Convention about ten years ago that a pleasant breakfast hour was spent with one of the Institute's most companionable members and progressive thinkers, Mr. Irving K. Pond, and in the course of the conversation he showed a photograph of a recent design from his office, an "arrangement of receding planes" as he described it, but it also had other characteristics of modern architecture as we know it today. It was some years before that Mr. Pond gave us his valuable book, "The Meaning of Architecture", and quoting one of the particularly worth-while thoughts it contains: "When the spirit no longer inspires, but forms are repeated from mere habit and for form's sake, art has ceased to live and the architecture reared in her name is a tomb."

Does not this give a suggestion as to what "the commotion is all about"? It might appear that now, when "function" makes such radically new demands, a discussion of its effect on "form" is needed to keep architecture alive.

* * *

AN interesting comment was made by a returning delegate to the Convention apropos of some investigation of architecture and architectural education which he made in connection with his eastern journey. The comment was that while commercial buildings appeared now to be of modern design, residences had as yet evidenced no noticeable departure from the traditional. In the schools he found that the greater portion of the work done by the students followed the modern, or contemporary, movement.

The illustrations of residential work in the architectural press would appear to support this statement regarding domestic architecture. In the moderate priced dwelling with which the architect struggles, the practical difficulties to be met, including the necessity for economy, operate against undue attention to arbitrary "form". Style is more often a governing principle, broadly interpreted to govern the needs of each particular problem as affected principally by environment. Tradition gave us the early Colonial, Mission and other influences from the Renaissance which have been in various ways happily modified to express the needs of to-day without conflict between form and function. Our failures in domestic architecture, and we all know there are many, are attributable to other causes than too close an adherence to traditional forms.

Of the architectural trend in the schools, the classic, hallowed by academic tradition, appeared for a long time to offer a workable language for useful expression in the study of design, but it is natural to expect that as civilized life changes and progresses the time will come when this language can no longer meet the educational needs of to-day. It is apparent that this time has arrived and education must recognize the prevailing architectural trend.

* * *

WHILE modernizing is important, a great need of to-day, particularly in this architectural frontier of the Pacific Coast, is to get for architecture a more general and adequate public recognition. An illuminating example is presented in one of our leading Pacific Coast cities where an imposing bridge is to be erected at a cost of some millions of dollars to be part of a great highway from Northern Alaska to Mexico and ultimately to South America. A considerable sum of money was provided for preliminary engineering supplemented by expert engineering advice from a distance and assurance was thus given that the problem would be adequately solved as to its general engineering character. This high level bridge will be a most conspicuous structure within the city. At the suggestion that some architectural consideration be given to this imposing monument the designing engineers were most sympathetic, but regretted that there was *no money* for architectural service.

The approach to this bridge occasions much controversy, opposing forces strenuously maintaining the correctness of radically different locations for this portion of the highway. The public sees no means being taken for traffic control, and other city planning studies, to solve the problem on the basis of facts. *No money* for such an investigation and a comprehensive plan.

Some thirty years ago, Boston and Cambridge built their first important bridge linking the two cities on opposite sides of the Charles River. This was the joint effort of architects and engineers and has since continuously contributed to the convenience and architectural character of these two cities. New York City continues to build bridges to its adjacent communities across the east and west rivers and in every case architects of unquestioned ability are engaged to colloborate in the design. The proper location of highways is also given thorough attention in the public interest. Our west coast cities will undoubtedly realize the value of this when its bridges are built and highways constructed and we, with countless future generations will then be constantly reminded of the lack of attention given to their location and character.

"The best preliminary sketches", says a humorous writer on architecture, "are made after the building is built". It can then be seen how the building should have been designed. Unfortunately, we do not live in a Wonderland where things happen backwards and highways and structures once constructed must remain to indefinitely serve the convenience or inconvenience of the city and permanently add to or detract from its architectural welfare.

CHARLES H. ALDEN, F.A.I.A.

"ENGLAND'S War on Ugliness" is the title of a very interesting article which appeared in the *Saturday Evening Post* of July 26th, 1930. Apparently the time has arrived in England when the various landscape decorations, such as billboards, hot dog stands and messy filling stations are to be tolerated no longer.

Let us hope that this country will follow England's lead and likewise wage an organized "War on Ugliness." We have grown so accustomed to the various disfigurements of the countryside that we have almost begun to consider them inevitable and ever present.

This subject has been discussed for years in the magazines and has been given some study and consideration in many organizations, but no actual declaration of war has been made with troops all marshaled together. This is the day of progress, and progress cannot countenance the present state of ugliness. Let's go. H. D.

* * *

STEPHEN CHILD of San Francisco, distinguished Landscape Architect, has an article in the 20th anniversary number of *Landscape Architecture*, which, by the way, is an exceptionally interesting and attractive issue, on "Two Decades of Landscape Architecture in Retrospect — 1910-1930." Summarizing the "high spots" in the last twenty years in Landscape Architecture, Mr. Child paragraphs the program of the profession as follows:

First, the defining and carrying on of the "Olmstedian tradition."

Second, the war work and the influence of Landscape Architecture upon the Government's housing developments, and particularly on city planning in general.

Third, the expansion and stabilizing of the profession.

With special reference to the last, Mr. Child assures us that "this advance has been widespread, for members of the American Society of Landscape Architecture are now doing splendid work in places as far removed from one another as Maine and Southern California, Florida and Oregon."

The profession of Landscape Architecture has won an indisputable place in the architectural field of today and there is every reason to believe its advancement will be as prolific in the next twenty years as it has been since 1910.

TIMES like these when retrenchments seem necessary, are the test of the winner or the loser. Advertisers who risk, who even permit a debt to creep up on advertising, are to the fore when the orders begin to come in; and like Frick and Carnegie, they have the business when their competitors are wondering how it all happened. When times seem slack the real progressive men are pushing forward. People with good judgment are buying while prices are low. Building is cheaper now than it will be for many years. There is more prospective building in the minds of finance now than for a time past. The advertiser of building materials who keeps his name to the fore now will get the business.—*Washington State Architect.*

All too many firms cut down their advertising when business is slack. That's just the time they should increase their advertising allowance. When an architect or engineer is not busy is when he has time to peruse the magazines and digest the advertisements. Then when business returns to normalcy he recalls having read about this or that material and he is prepared to specify and use these products.

* * *

EMERSON KNIGHT'S fine article on New Roads in Old Mexico, provoked much favorable comment from readers of THE ARCHITECT AND ENGINEER for August. Mr. Knight traveled in Old Mexico during four months of 1929, serving while there the National Highway Commission and railroad companies. He personally photographed many architectural subjects and received a series of six volumes entitled "*Iglesias de Mexico*," ("Churches of Mexico") from the Secretary of the Treasury of Mexico, by whom they were published. These unusual volumes and photographs are available for inspection at the office of Mr. Knight, in San Francisco. Mr. Knight's scholarly article in THE ARCHITECT AND ENGINEER is unquestionably a very valuable contribution to the descriptive literature of Old Mexico.

MODERN DESIGN AND METHODS FEATURE LOS ANGELES OFFICE BUILDING

THE E. Clem Wilson office building at Wilshire Boulevard and LaBrea Avenue, Los Angeles, has many interesting features which make it unique in its adaptation to strictly modern requirements of the tenants. The general character of the design is modern with the vertical lines accentuated. As the mass rises, it sets back at frequent intervals, thus providing many well located roof areas which anticipate the use of planting and will provide out-door office space for no less than 44 of the offices throughout the building.

In the development of this type of design, these roof areas have assumed importance as a valuable outdoor feature for offices adjacent to them. The need for a roofing that would not only serve as a protective coating, but meet the exacting demands of constant traffic, became vitally important. Built-up roofing, while ideal for ordinary use, was not entirely practical for the purpose. Cement slabs proved unsatisfactory, revealing a tendency to crack and become unsightly in appearance. It was apparent that the problem demanded a roofing that would meet these three conditions: First, it must afford permanent protection: Second, it must be hard wearing and resilient: Third, it must be attractive in appearance.

In the solution of this problem, Meyer and Holler, the designers, employed a colored emulsified asphalt mastic for the various roofing areas occasioned by the set-back style. It was imperative that the roofing withstand unusual wear and yet give absolute protection to the floors below. Through the co-operation of contractor and manufacturer, a definite set of specifications for the installation was decided upon, and the application was made as follows:

The roof decks were first given a priming coat of standard Pioneer emulsified asphalt mixed with 30% of water. This was allowed to set until the moisture content had thoroughly evaporated. A layer of 30 pound Pioneer asphalt saturated felt was then applied loosely over the priming coat. Seams were well coated with hot asphalt. Then followed a heavy coating of emulsified asphalt, into which a layer of wide mesh burlap was imbedded. Next, a thoroughly mixed mastic consisting of (1) one part of Portland cement, (2) two parts of sand, (3) three parts of roofing gravel, and (2) two parts of Pioneer mastic type emulsified asphalt was prepared in an ordinary concrete mixer. Cement, sand and gravel were mixed to a stiff mortar consistency, after which the emulsified asphalt was incorporated. The mastic was then applied between screed boards to the desired thickness, and the surface leveled with a strike-off board. Wood floating was employed to give the mastic a rough surface. Drying was retarded by means of spraying, and immediately prior to the final set of the material, the surface was well troweled to a smooth finish. Upon completion of the building, a color coat of Pioneer color mastic was applied to give beauty to the finished job.

In addition to the out-door feature, the building is unique in providing an unusually large proportion of offices with two sides to the exterior on corners. All of the offices are treated with acoustical materials to assist in insuring as much quietness as possible.

The building being situated at two of the major traffic arteries of the city has made desirable the provision of show window display space for the entire street fronts of the second story, offering an opportunity for the tenants to appeal to the great number of people passing the building in machines. This, in turn,

E. CLEM WILSON BUILDING, LOS ANGELES

DETAIL OF MAIN ENTRANCE

DETAIL OF STORE FRONT

has also resulted in influencing the architectural design of the lower portion of the building along strictly modern lines with large areas of plate glass and small structural members of metal.

Another feature which the Charles G. Andrews Company, leasing managers, believe will be much appreciated by the tenants of the building, is the parking space for automobiles in the rear and in the basement. From LaBrea one may drive into an open space in the rear where patrons may leave their cars to be taken to the garage. A rear pedestrian entrance leads directly into the main floor elevator lobby.

ROOF AREA, SHOWING WIDE MESH BURLAP EMBEDDED IN HEAVY LAYER OF STANDARD PIONEER EMULSIFIED ASPHALT

COMPLETION OF MASTIC INSTALLATION. A THREE HUNDRED POUND ROLLER USED TO CONSOLIDATE THE MASTIC

WITH *the* ARCHITECTS

CONCRETE WAREHOUSE

A three-story and basement reinforced concrete office building and warehouse to be erected at Sansome, Vallejo and Battery Streets, San Francisco, is being designed in the offices of H. C. Baumann, 251 Kearny Street, San Francisco. Poultry Producers of Central California are the owners and they plan to spend $150,000 on the improvements. Mr. Baumann is also preparing drawings for a 16-story steel frame and concrete hotel building for the Shell-Drake Hotel Company. The location is Pine Street, between Powell and Stockton Streets, San Francisco. Estimated cost is $250,000.

SANTA CRUZ RECREATION BUILDING

Joseph L. Stewart, Federal Reserve Building, San Francisco, has let a contract to Carl N. Swenson, 640 Stockton Avenue, San Jose, for $161,500 to build a two-story reinforced concrete recreation building in Santa Cruz for the Inter-State Recreation Corporation, Ltd., Phelan Building, San Francisco. Similar enterprises are planned for Eureka, Stockton, Sacramento and San Jose.

PIEDMONT PARISH HOUSE

Plans have been completed by W. E. Schirmer, architect of Oakland, for a two-story frame and stucco parish house in Piedmont for the Corpus Christi Parish. Sullivan & Sullivan have been awarded the contract for $18,999. Mr. Schirmer is preparing plans and drawings for alterations and additions to the Madison Lake Apartment hotel, Oakland, for the Empire Trading Company.

CHESTER H. TREICHEL BUSY

New work in the office of Chester H. Treichel, American Building, Oakland, includes a three-story apartment building on 35th Street, near Telegraph Avenue, Oakland for Nelson Brothers and estimated to cost $65,000, and alterations and additions to the mortuary of H. W. Seramur in San Leandro to cost $25,000.

HILLSBOROUGH RESIDENCE

Plans have been completed by Gardner A. Dailey, 425 Mason Street, San Francisco, for a ten-room $18,000 residence in the Spanish style for Boris Kitchen of Hillsborough.

ARCHITECTURAL EXHIBITION

An architectural exhibition featuring the work of Heth Wharton, A. I. A., was held the first part of August in the Architects Building Material Exhibit, Fifth and Figueroa Streets, Los Angeles. The exhibit included photographs and renderings of office buildings, theaters, apartment houses, factories and store buildings, also sketches and models of residences, varying from small bungalows to forty room houses.

The commercial buildings designed by Mr. Wharton are marked by a simple and direct use of materials and forms and are modern to that extent, but it was noticeable that the chevron and other "modern" forms were missing from the detail. In his domestic work Mr. Wharton follows, to a greater or less extent, the traditions of California.

WORK OF MARK DANIELS

Photographs and paintings of beautiful homes and gardens of Southern California were shown in a special exhibition of the work of Mark Daniels, architect, in the Architects' Building Material Exhibit, Fifth and Figueroa Streets, Los Angeles, the past month.

The exhibit was unique in that one half illustrated the work of Mr. Daniels as an architect and the other half his work as a landscape architect. There were some 70 photographs by Ernest M. Pratt of buildings which were designed and built by Mr. Daniels, 15 renderings in black and white and several renderings in color.

ALTERATIONS TO STORE BUILDING

Messrs. Sidney B., Noble & Archie T. Newsom, Federal Realty Building, Oakland, have prepared plans for extensive alterations to a store building and rooming house at Seventh and Washington Streets, Oakland, the property of A. G. Moffatt & Co.

COUNTRY CLUB BUILDING

Plans have been prepared by Clarence A. Tantau, Shreve Building, San Francisco, for a one-story brick country club building at Santa Cruz, estimated to cost $100,000. The owners are the Santa Cruz Development Company.

PERSONAL

James M. Taylor, Jr., has entered general architectural practice at 708 McDowell Building, Seattle. Mr. Taylor is a graduate in architecture from Kansas State College, and studied one year at Atelier Denver in the Colorado state capital. During the past three years he has been working in the office of John Graham, Seattle.

Edward L. Merritt, architect, has moved his office to 701 Leary Building, Seattle. He was previously located in the Empire Building.

Albert Schroepfer, architect, received the endorsement of the Northern California Chapter, American Institute of Architects, for the office of Freeholder.

Edgar H. Cline has moved from 632 Petroleum Securities Building, Los Angeles, to room 728 in the same building.

Charles H. Biggar, architect of Bakersfield, has moved from the Bank of Italy Building to 554 Haberfelde Building in that city.

Gordon E. Lum, a graduate in architecture from the University of Minnesota, has recently joined the staff of Russell and Lance, architects, Jones Building, Tacoma.

Gotthard Arntzen, architect, has moved his studio and home to 320 Garfield Street, Seattle. He previously was located at 2711 Queen Anne Avenue.

John E. Kelly, Jr., has opened an office at 3011 Arcade Building, Seattle, for the practice of architecture.

E. T. Osburn, architect, with studio in the Leary Building, Seattle, is convalescing from a serious illness which confined him in the Swedish Hospital for several weeks.

Ogden F. Beeman announces his resignation from the faculty of the Washington State College at Pullman, and removal to Spokane where he is engaged in architectural work at S-507 Howard Street.

A. Willatsen has moved from the Lumber Exchange Building, Seattle, to the Alaska Building.

ARCHITECT ELECTED PRESIDENT

Officers of the Miniature Golf Owners' Association recently organized at the Hotel Oakland, include Casebolt Dakin for president. Mr. Dakin is an architect and at one time was an instructor in architecture at the University of California.

ARCHITECTS MOVE

The following architects report changes of their business addresses:

Eugen N. Maurer removed from Burlingame to 76 Castro Street, San Francisco.

Franklyn E. Warner from Washington, D. C. to 2336 Eighty-first Avenue, Oakland.

Louis Korn to 6332 Warner Drive, Los Angeles.

Edward Cray Taylor to 803 3rd Street, Los Angeles.

J. Kendall Masten from San Francisco to 212 Bon Air Street, La Jolla.

Stanford C. Rudolph from Ventura to 360 South Westlake Avenue, Los Angeles.

MOVES TO LOS ANGELES

W. L. Schmolle, architect, has closed his office in the Clunie Building, San Francisco, and is now located at 2030 Wilshire Boulevard, Los Angeles. Mr. Schmolle is at work on two large projects for a former client and a full announcement of the work will be made shortly. Mr. Schmolle came to San Francisco in 1906 from Buffalo, N. Y., where he was an active member of the A. I. A. Chapter. He designed the first part of the present Robert Dollar Building, at that time the Insurance Building, San Francisco; also the McNutt Hospital, Drake Hotel and the Chancellor & Lyon warehouse and office building in Los Angeles.

NOT POPULAR FOR RESIDENCES

"Freak architecture is not being used on country houses or residences in general," Earl Dugan, member of Sutton, Whitney and Dugan, architects of Tacoma, Washington, is quoted as saying. "Modernistic designs have invaded commercial structures to a marked degree, but conservative ideas still rule the home building field."

ALTERATIONS TO STORE

George A. Schastey, Monadnock Building, San Francisco, has completed plans for extensive alterations to a one and two-story building on Stockton Street, between Post and Geary Streets, San Francisco, for Foster & O'Rear, confectioners. The improvements will cost $40,000.

SAN JOSE BUILDING

The office of Wm. H. Weeks is preparing working drawings for a one and one half-story steel and brick recreation building at San Jose for C. H. Kamm. The lessee is O. J. Foreman. Costing $45,000, the building will be known as the Garden City Recreation Center.

DANA BARTLETT EXHIBITS WORK

Architectural renderings in color by Dana Bartlett were shown in the Architects' Building Material Exhibit at Fifth and Figueroa Streets, Los Angeles, during the latter part of August.

Mr. Bartlett is known internationally, and is referred to in "Who's Who in American Art" as a painter, illustrator and teacher. He has lately turned his hand to architectural renderings.

Mr. Bartlett's paintings are included in the permanent collection of the Los Angeles Museum of Art and many other museums, public libraries, colleges and private collections throughout the United States. He has traveled extensively in foreign countries and has recently devoted a number of years to the study of California Missions.

ARTHUR H. STIBOLT

Arthur H. Stibolt, architect of Los Angeles, was found dead on the golf course in Balboa Park, San Diego, August 1. Mr. Stibolt was 50 years of age. He lived at 570 N. Cahuenga Blvd., Hollywood. His widow, Mrs. Gladys Stibolt, and a 10-year-old daughter, survive.

Mr. Stibolt had lived in Los Angeles for about 20 years, during which time he practiced architecture, part of the time independently and part in association with other architects. His particular forte was designing and he was an artist of considerable ability. He was well known for his architectural renderings.

PITTSBURG CHURCH

Plans for a modern church of the Italian Romanesque type of architecture, are being prepared by Arnold Constable, architect, for the Roman Catholic Archbishop of San Francisco. The edifice will be erected in Pittsburg, Contra Costa County, for St. Peter Martyr Parish.

It will be of reinforced concrete construction with steel roof trusses and will cover an area of 120 by 42 feet. Plans will provide for a parish hall and auditorium to seat 700 persons.

NEW COLLEGE OF ARCHITECTURE

Announcement is made of the opening of the Los Angeles College of Architecture and Engineering at 2256 Venice Boulevard, Los Angeles. M. T. Cantell, Fellow of the Royal Institute of British Architects, architect and consulting engineer, is the principal, and Winham Morley, vice-principal. The purpose of the school is to give a complete system of practical training for those who wish to follow any one of the various branches of architecture, building or engineering as a profession, to provide advanced instruction for those already practicing the professions and to prepare candidates for certificates to practice architecture or engineering or for civil service examinations. Both day and evening classes are held, the courses embracing the following subjects:

Day College—(1) Architecture, Building Construction and Drafting for the training of architectural draftsmen; (2) Structural Engineering, Building Construction and Drafting, for the training of structural engineering draftsmen.

(3) Civil Engineering, Construction and Drafting, for the training of civil engineering draftsmen.

(4) Building Construction and Estimating, for the general contracting business.

(5) Detailing and Estimating, for carpenters and millworkers.

(6) Detailing and Estimating, for those wishing to enter the office of material merchants, equipment and fixture manufacturers.

(7) Map Drafting, such as is required for insurance, real estate and similar work.

(8) Courses for candidates preparing for Civil Service and other architectural and building examinations.

Evening College—These courses will include those of the Day College and in addition the following will be provided.

(1) For the preparation of candidates for the State Board of Architects examinations for a certificate to practice architecture in the State of California.

(2) For the preparation of candidates for the State Board of Engineers examinations for a certificate to practice Civil Engineering in the State of California.

(3) Strength of Materials and Structural Engineering.

(4) Strength of Materials and Civil Engineering.

(5) Designing of Structures in Reinforced Concrete.

(6) Designing of Structures in Structural Steel.

(7) Quantity Surveying and Estimating.

(8) For Superintendents of Construction and Building Inspectors.

(9) For Building Foremen.

(10) Drafting and Mathematics for Sheet Metal Workers and Plumbers.

100 STORY BUILDINGS IMPRACTICAL

(From the *San Francisco Chronicle*)

Plans for a 105 story building on lower Wall Street, New York, have been modified to make the structure sixty-five stories high. This is not because of any physical difficulties in the way of the original scheme. The architects and engineers are ready to go ahead and they say the sky is the limit. But the owners have been looking into the matter of the elevator space that would be required and are understood to have been largely influenced by this factor.

The higher the building the farther the elevators must travel and the longer they must take. Express service and higher speed answers the problem to some extent, but obviously there is some limit in this direction. At that point the increased shaft space subtracted from the rentable floor space becomes a menace to rental returns. Whether the sixty-five story limit set by the Wall Street building promoters is the economic dividing line may be argued. But evidently they are convinced that while there may be no physical limit in sight to the height to which they can build there is a definite limitation in economic law.

RENO ARCHITECT BUSY

Work in the office of F. J. de Longchamps, architect of Reno, includes preliminary sketches for a fifteen-story Class A tower to the Reno National Bank Building to cost $600,000, alterations to a frame apartment building for C. W. Smith and a one-story brick gymnasium for the Mineral County High School District at Hawthorne, Nevada.

STORE AND OFFICE BUILDING

An eight-story Class A store and office building is being designed in the office of S. Charles Lee, Petroleum Securities Building, Los Angeles. The new structure will occupy the southeast corner of Wilshire Boulevard and San Vicente Street and is for R. C. Taylor and associates.

MEDICAL OFFICE BUILDING

On the northeast corner of DeLongpre and Vermont Avenues, Los Angeles, a thirteen-story Class A medical office building will be erected for Corday & Broder from plans by Charles F. Whittlesey, 618 Southwestern Avenue, Los Angeles.

BRICK DETENTION HOME

Wm. Mooser & Company, Monadnock Building, San Francisco, are preparing plans for a one and two-story brick detention home for San Lusi Obispo County. An appropriation of $30,000, is available.

ONE IS BORN EVERY DAY

(From *The Lintel*)

The following letter from Robert W. Snyder, architect, San Diego, has been received and noted with much interest:

Dear Mr. Robin:

Am enclosing clip from *San Diego Union* Development Page.

Can you beat it? It seems pretty rare to me.

Yours,

R.W.Snyder.

We disagree only in one point with Mr. Snyder; his use of the word *rare*. We believe *raw* would be more exact.

It is entitled "Home Building Hints by S. D. Architect." S. D. we imagine is an abbreviation for "Some Damn"—Certainly not for San Diego. The article is too long and idiotic to print in full but the following choice bits will serve to show why many persons are possessed with the belief that architects are the bunk.

"Generally speaking, a sideboard looks best when it is at one side of the dining room.

"If there is a pretty garden visible from the dining room it is well to have a wide group of three or four windows.

"Two doors are usually placed between the dining room and kitchen. In many cases much space can be saved by a single door.

"If the hall is 20 to 25 feet long it can be 8 to 10 feet wide in order to preserve good proportions but in small houses halls are frequently less in length, in which case they may be narrower.

"Large houses should be provided with a staircase from the first to second stories.

"If there is a billiard room in the attic or basement, a separate staircase is frequently desirable."

It is quite certain that such doggerel as this does more harm than good to the conscientious architect who has something worth while to contribute to his client.

UNIVERSITY NUMBER

The October ARCHITECT AND ENGINEER will be of exceptional interest. The new State University Buildings at Berkeley and Los Angeles will be featured with articles by Robert G. Sproul, president of the University of California, H. J. Brunnier, structural engineer, G. F. Hudson, mechanical engineer, and others prominent in the design and construction of the University buildings. More than forty full page plates and plans will be shown. Architects who designed the several University buildings are Geo. W. Kelham, Allison and Allison, Arthur Brown, Jr., and W. C. Hays.

NEW DISPLAY ROOM OF McCRAY COMPANY, SAN FRANCISCO

McCray Refrigerator Sales Corp. Has New San Francisco Home

The McCray Refrigerator Sales Corporation has recently moved into new quarters on the ground floor of the *Chronicle* Building, 933 Mission Street, San Francisco. Approximately 2700 square feet of floor space has been leased and according to A. Van Vechten, the firm's representative for Northern California, the new location gives the McCray Company the largest display of refrigerators and refrigerator counters on the Pacific Coast. The stock includes the latest model heavy duty display cases for butcher shops, groceries and delicatessen stores, and also the new types of porcelain hospital refrigerators and de luxe type grocers' refrigerators. In addition the company is carrying in stock in the San Francisco office, the regular standard McCray restaurant, hotel and grocery refrigerators. Any type of mechanical refrigeration on the market may be used with McCray models.

Some of the more important installations of McCray refrigerators in Northern California since the first of the year are the San Mateo County Hospital at Beresford, the Union League Golf & Country Club, the Courtesy Market at 8th Avenue and Clement Street, and the Golden Rath Delicatessen Store, 5423 Geary Street, San Francisco.

KAWNEER BOOKLET

A new booklet just issued by the Kawneer Company, Niles, Michigan, and Berkeley, California, features some of the company's recent store front installations and offers suggestions of value to architects and others who have problems in this branch of the building industry. The engineering department of the Kawneer Company will be glad to offer advice or cooperate with architects who have store front problems, either for new buildings or old. The retail merchants' most effective advertising medium is his display window. To attract favorable attention and to create desire for mechandise displayed therein, is the purpose of the modern store front. To this end the Kawneer Company offers its years of research and experience in the manufacture of the best store front equipment obtainable.

APPRECIATION

The Architect and Engineer,

We are glad to have this opportunity to commend you on the July issue of The Architect and Engineer. The recent issues of this publication, in our judgment, compare very favorably with the architectural publications of the east.

Wishing you a continuation of your success, we are

Yours very truly,

George W. Kelham,

By: Harry A. Thomsen, Jr.

WILLIAM JAMES DODD

An Appreciation

By William Lee Woollett

LIKE processions, and altars, and incense: like patterns between tall pillars of Gothic Cathedrals are the unsaid prayers of friends, when we go before them——. So borrowing from a letter written by a friend of this our friend:

"The idea of his life shall sweetly creep
Into your study of imagination;
And every lovely aspect of his life
Shall come apparelled in more precious habit—
More moving elegant, and full of life—
Than when he lived indeed."

The grand and sweeping and yet suave movement of life into the aspect of death, leaves us with a deep sense of gratitude for him as he was. William James Dodd achieved the rare distinction of being understood by his fellows. His mind was built on the ample lines which must always characterize complete integrity. Also the key which unlocked the doors of many forms of success was his—the key of Kindness. Our friend used this key, it was not rusty, but worn and carried with the gracious knightly grace of a Baldric.

* * *

To those who knew and loved Mr. Dodd chiefly for his human qualities it might be interesting to recite somewhat concerning his professional career, a phase of life which was not allowed to intrude abnormally into the making of life as a whole. In short, he succeeded in making the act of living a work of Art. His natural flair for functioning life as a unit, provided the background for a gracious attitude and an untiring effort. Thus his achievement in diverse avenues as the natural crown of his character.

While living in Chicago as a youth the urge to create beautiful things came to him. He obtained his first technical training at the Art Institute of that city, working in an architect's office meanwhile. Later, while employed in Pullman, athletics in the form of rowing exhibited another facet of his nature. He pulled stroke in the crew of the Pullman Club, and he was quite human enough to enjoy the recollection in later years.

For twenty-five years thereinafter he was a leading spirit in the community of which Louisville, Kentucky, was the center. Here he created noteworthy buildings of which the Presbyterian Seminary was perhaps the most outstanding example. Because of the general appreciation of the community for its splendid qualities he gained thereby a notable success.

St. Pauls Church, the Fourth Methodist Church in the Gothic style, the Christian Science Church in the Spanish Renaissance, the Seelbach Hotel, and many commercial buildings followed.

A recitation of the long list of his achievements in the profession during his life as a citizen of Los Angeles would be superfluous since we know them. But that William Dodd was the architect for the Pacific Mutual Building shall be mentioned because it stands today as on the day it was completed, the outstanding office building in the city of Los Angeles. Many worthy buildings have been built in recent years but no building is known better for the general excellence of its architecture and the sanity of every characteristic of practical utility and convenience. The building is opulent without being extravagant. It is a pleasure for the initiated and uninitiated alike to go in and out of its doors. The unmeasured and imponderable qualities which Dodd expressed in his life were exemplified in this building.

Civic duties appealed to our friend. He gave as president of the State Board of Architecture an ideal service. The dignity of the profession was through him a genuinely real thing.

Robinson's store, the Ville de Paris, the Public Library in Hollywood, the Examiner Building, are outstanding examples of his craft. Many prominent residences might be noted, signifying a willingness to serve in the intimate personal affairs of his neighbors. All types and kinds of building came under the spell of this genial business man, an artist at heart.

Of the many clubs he frequented, the Uplifters' Club claimed him most a congenial spirit. He exerted a beneficent influence on the earlier activities and achievements of this noteworthy organization.

But the enduring monument which William J. Dodd left behind, more creditable than his marked business success, more heralded than his power in social circles, was the serene and gentle essence which everyone recognized. He was a good man! I cannot help but put the thought into an idealic frame in Chaucer's words, "A very perfect gentle Knight."

APARTMENT BUILDING

Arthur D. Janssen, 822 Exchange Building, San Francisco, has completed plans for a three story and basement, Class C steel frame apartment building, for the W. R. Voorhees Company, Exchange Building, San Francisco. The structural design was prepared by T. Ronneberg, C. E. The building will contain high class apartments of six rooms each and will cost $150,000.

OAKLAND APARTMENTS

Plans have been prepared by Douglas Dacre Stone, Howden Building, Oakland, for a two story and basement, frame and stucco apartment building, for R. E. Mayer, estimated to cost $150,000. The building will be 175x200 feet and will contain approximately one hundred rooms. The location is on Crescent Street, near Santa Clara Avenue, Oakland.

BRICK APARTMENTS

Plans have been completed by Edward E. Young of San Francisco, for a six story and basement Class C brick apartment building on the southwest corner of California and Octavia Streets, San Francisco, for Herman D. Hogrefe. A contract for the structural steel has been awarded to the Golden Gate Iron Works.

SAN BERNARDINO HOTEL

I. E. Loveless, Robertson Building, Beverly Hills, has completed plans for a five story Class A hospital to be built at San Bernardino for the Sisters of Charity. The main building will be 200x200 feet, accommodating 125 beds.

SAN FRANCISCO APARTMENTS

Albert H. Larson, 447 Sutter Street, San Francisco, is the architect and manager of construction of a six story, Class B reinforced concrete apartment building at Buena Vista Avenue and Waller Street, San Francisco, for C. Peterson and associates.

OAKLAND DEPARTMENT STORE

Plans are being prepared in the office of William Knowles, 1214 Webster Street, Oakland, for a Class A department store building at 19th Street and Broadway, for Weinstein's of San Francisco.

HALL OF MUSIC

William T. Johnson, architect of San Diego, has completed plans for a Hall of Music for Claremont College, estimated to cost $500,000.

THE CASE OF J. G. LEHMAN, NON-CERTIFIED ARCHITECT

The recent conviction of J. G. Lehman, of Redwood City, for practicing architecture without a license, has attracted wide attention throughout the Pacific Coast. The following statement of the case and explanation of the particular provision of the law under which conviction was secured was prepared by William T. Sweigert, attorney, of San Francisco:

"On July 7th one J. G. Lehman was arrested in Redwood City for violation of the state law regulating the practice of architecture.

"It appears that Lehman had consulted the board of trustees of the First Baptist Church of Redwood City, regarding plans and specifications for the erection of a new building. He was employed to draw them for five hundred dollars and after completing some of them, was paid two hundred dollars, on account.

"It was later learned that Lehman was not an architect holding a certificate to practice under the laws of the state. He had not, however, informed the board of trustees to that effect in writing. Complaint was made. A representative of the state board investigated the case. The arrest was made; the charge was prosecuted and Lehman, on July 18, was found guilty, by the Justice Court at Redwood City, and sentenced to a fine of two hundred dollars, or in lieu thereof, twenty days in the county jail.

"Under the state law, it is a misdemeanor for any person to practice architecture without a certificate. The law formerly provided, however, that nothing in it would prevent any person from furnishing plans or other data for buildings, if such person fully informed the person for whom the plans or data were furnished, that he was not a certified architect. Under this provision, a person would not have violated the law, if the person drawing the plans was not a certified architect.

"On April 6, 1929, the legislature amended the law in an important respect. The law as it now stands, makes it a misdemeanor, punishable by a fine of not less than fifty nor more than five hundred dollars, or by imprisonment in the county jail not exceeding six months, or by both such fine and imprisonment for any person to practice architecture in this state without a certificate, or to advertise or put out any sign or card or other device which might indicate to the public that he is an architect or that be is qualified to engage in the practice of architecture.

"The proviso formerly contained in the law has been narrowed to require that an uncertified person, furnishing plans, drawings, or specifications, instruments of service, or other data for buildings, must prior to accepting employment or commencing work, fully inform his employer in writing that he is not an architect. In other words, an uncertified person furnishing such data is not now fully protected, merely by orally informing the person employing him that he is not an architect. The uncertified person must give that information in writing in order to comply with the law.

"The law now does not apply to persons furnishing plans, drawings, specifications, instruments of service or other data for labor and materials to be furnished for store fronts, interior alterations or additions, fixtures, cabinet work, furniture, or other appliances or equipment, or for any work necessary to provide for their installation, or for any alterations or additions to any building necessary to or attendant upon the installation of such work. In other words, uncertified persons may furnish plans and specifications for work of this limited type.

"The law still provides, of course, that any person may make plans or drawings for his own buildings.

"With respect to practicing architecture without a certificate it should be remembered that, in addition to the criminal aspect, no recovery may be had in a civil action for services rendered by an uncertified person in violation of the law."

SOCIETY and CLUB MEETINGS

STATE ASSOCIATION OF ARCHITECTS

An interesting and well attended meeting of the Southern Section, State Association of California Architects, was held at the Los Angeles Chamber of Commerce, August 13. James F. Collins, director of the State Department of Professional and Vocational Standards, made an address describing the work of the state department of which he is the director. Mr. Collins was appointed head of this department upon its creation one year ago. It was formed to regulate the activities of various professional organizations in California, representing fifteen different professions. Mr. Collins called attention to the importance of the construction industry which, he said, is responsible for sixty to seventy per cent of the income of the nation. He stated that for the betterment of the industry the four units, financing, design, construction and materials, should work toward a closer relationship and that the financial and material dealer must be more careful in extending credit on building projects if the irresponsible concerns operating in this field are to be eliminated. He also stated that 4000 contractors had been eliminated from practice since the contractor's license law became effective, 3000 of them having been eliminated by the law. He said that complaints from the public since that time have been reduced to a minimum.

A. M. Edelman, vice-chairman of the executive board, called the meeting to order and turned the chair over to Myron Hunt, who presided during the evening. Mr. Hunt introduced the following directors of the State Association: John Parkinson, Louis J. Gill, Albert J. Evers, A. M. Edelman, John C. Austin, Charles F. Dean and J. J. Donovan.

Mr. Evers spoke of the organization of the State Association, in which he took an important part.

Mr. Austin stated that more had been accomplished for the architectural profession during the past year than during any previous five year period and suggested that each member contribute something to the association to assure its continued success.

Mr. Bergstrom reported on the status of the uniform building code and standard documents used in connection with architectural and construction work, both of which are in the course of preparation.

Mr. Donovan paid tribute to Mr. Collins and the work of his department and to the California Chapters of the American Institute of Architects for their help to the association and the profession.

SOUTHERN CALIFORNIA CHAPTER

The Beverly Hills home of Harold Lloyd was the scene of the regular monthly meeting of the Southern California Chapter, American Institute of Architects, held on Tuesday evening, August 19. The chapter members were guests of Mr. Lloyd, who was present.

Dinner was served out-of-doors and was followed by a tour of the house and grounds. The house was designed by Webber and Spaulding, architects, of Los Angeles.

After the meeting the guests adjourned to the living-room, where they were shown a preview of a new talking picture.

The meeting was purely a social affair with about 100 members attending. H. C. Chambers, president of the chapter, presided.

SAN FRANCISCO ARCHITECTURAL CLUB

The club's major activity, the study of architectural design, starts a new season this month. The first analytique, or order problem, will be given September 27, at 2 p. m. Now is the time for all those wishing to study to enroll. Don't forget our club record—nine Harvard scholarships in ten years!

By this time the engineering class should be under way but it is not yet too late to join. This class will give one the necessary instruction in structural design to enable him to pass the State Board examination.

It is hoped that the problem of new club rooms will be solved very shortly and that we will have more comfortable, spacious and homelike quarters. It is very likely that the building committee will have a location picked before the next business meeting. Donations for the new quarters will be welcome. President Ted Ruegg has returned and will again preside at the regular meetings.—I. S.

L. A. ARCHITECTURAL CLUB

According to an announcement by George Hales, the Los Angeles Architectural Club will sponsor a school, to be known as the Los Angeles School of Architectural Arts and Crafts. Its purpose will be to teach those Arts and Crafts which collectively comprise the art of architecture; namely, Sculpture, Mural Painting, Interior Decoration, an Atelier, Architectural Delineation, Water Color, Structural design and courses leading toward Certification.

A lease has been secured on desirable downtown property and material men have offered a supply of building products of sufficient quantity to build and equip the entire school. Several generous pledges of

The new E. Clem Wilson building

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PIONEER ASPHALT EMULSION

Modern office building design with its setback masses and outdoor office spaces has presented a new consideration for the architect . . . that of combining permanent roofing protection with wear-resisting qualities that will withstand the rigors of constant foot traffic.

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For more than forty years, the name Pioneer has been linked with every important roofing advancement on the Pacific coast. During this period it has acquired a vast knowledge of Western roofing requirements. Avail yourself of this information during the progress of plans! Simply write or phone our nearest branch office and a competent representative will call.

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SEATTLE, WASH.
Main 5842

1117 Cont. Nat. Bank Bldg.
SALT LAKE CITY, UTAH
Wasatch 7954

money have also been made. Plans are in the hands of the directors for consideration.

In the same building as the school will be the club rooms and offices of the Architectural Club and any other architectural organizations which may so elect. A large assembly room with smaller class rooms and a paved patio form a central group which when thrown open becomes large enough for conventions and exhibits.

It is hoped that late autumn will see the completion of this long contemplated ideal and that the school will be formally opened with the new year.

The Architectural Club has moved in the meantime to temporary quarters at 216 Architects' Building, where all business will be conducted.

WASHINGTON STATE CHAPTER

A special meeting was held at the College Club, August 11, in compliance with a by-law requiring that a special meeting be called for consideration of specific business named in a petition, properly signed, and setting forth the purpose of the meeting.

The specific business for consideration was as follows:

"To receive and take action on the report of the City Planning Committee relative to the reorganization of the Seattle City Planning Commission referred to this Committee at the June meeting.

"To give any further consideration desired to the question of architectural design in connection with the Aurora Avenue Bridge, Seattle, resulting from the resolution authorized at the June meeting."

The meeting was called to order by Vice-President Holmes. Harlan Thomas gave the recommendations of the committee in the form of a letter which it was suggested be sent by the Chapter to the Seattle Planning Commission acknowledging the receipt of information regarding the reorganization of the Commission, expressing the Chapter's appreciation of the work accomplished and other views on the situation.

After some discussion resulting in some additions to the letter as submitted by the committee the report was adopted and the secretary instructed to send the following communication to the secretary of the Seattle City Planning Commission:

August 11, 1930.

Mrs. Elmer G. Waldron, Secretary,
Seattle City Planning Commission,
County-City Building,
Seattle, Washington.
Dear Madam:

Our representative on the City Planning Commission has submitted to us for consideration a resolution of F. W. Roberge and Council Bill No. 49704, both proposing a new form of city planning commission as a substitute for the one with the representative character now provided. Accompanying this Resolution and Council Bill were reports from Committees of your Commission presenting arguments for and against this proposed change. We have also had before us

modern—

Inset photograph shows two of the Kinnear Rolling Steel Doors used in the new Shell Oil Company Building in San Francisco. Modern in every respect, it was only natural that Kinnear Rolling Doors should be chosen for this magnificent edifice.

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Ordinance No. 59625, recently enacted, providing for a similar substitution. These have all been given consideration by the City Planning Committee of the Chapter and by the Chapter as a whole at a special meeting called for this purpose.

On account of the enactment of Ordinance No. 59625, making effective a reorganization of the City Planning Commission, the Chapter does not consider it opportune at this time to express any opinion on the necessity for, or value of, the proposed change. It does, however, desire to express to the members of the Commission its appreciation of the valuable services rendered by its members in their endeavors to function under the difficult conditions with which it has had to contend.

Foremost among these difficult conditions has been the lack of an up-to-date comprehensive or master plan. The Washington State Chapter, A. I. A., has continuously advocated such a plan as a basis for city planning and has been in thorough sympathy with the Commission in its endeavors to secure appropriations for that purpose. Without the master plan, the recommendations of the Commission could not be expected to be otherwise than ineffective.

The Chapter believes also that another obstacle to effective work by the Commission has been its lack of control over engineering and other technical assistance. Also that no provision was made to compel attention to the Commission's recommendations, the City's legislative and administrative officials being at liberty to ignore, reverse or accept these recommendations, in whole or in part as it might desire. This was necessarily destructive of any comprehensive purpose governing the work of the Commission.

The Chapter believes that the work of the Commission has been eminently valuable in directing attention to the many city planning problems demanding attention by the city, whether the recommendations of the Commission were or were not actually realized to any appreciable extent. It believes also that the representative character of the Commission has been of value not only in contributing the varying points of view to the work of the Commission but in disseminating the importance of city planning throughout various groups in the city. The Chapter as representing one of these groups hopes there will be an opportunity to take part in continuing this cooperative interest to advance the city planning interests of the community.

The Chapter also feels that some record of the accomplishments of the Commission should be left on file. These are too numerous to touch on in this let-

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State Association of California Architects

Program for Third Annual Convention

Hotel Del Monte, *Oct. 10-11, 1930*

FRIDAY, OCT. 10

Morning: *Chairman,* JOHN J. DONOVAN, Oakland.
Registration
Business Session; Reports of Officers

Noon: *Chairman,* FREDERICK H. MEYER.
Luncheon; Subject: "Legitimate Group and Individual Publicity." Address by Newton B. Drury.
Round Table Discussion.

Afternoon: *Chairman,* JOHN J. DONOVAN, Oakland.
Business Session; Reports of Committees.
17-Mile Drive for Ladies.

Evening: *Chairman,* H. C. CHAMBERS, Los Angeles.
Convention Banquet: Theme, "Co-operation."
20-Minute address by Guest Speaker.
5-Minute talks as follows:

"Co-operation with Allied Arts" .....
CARLETON M. WINSLOW, *Contributing Editor,* THE ARCHITECT AND ENGINEER
"Co-operation with Clients" ..... H. ROY KELLEY, Los Angeles
"Co-operation with Contractors" ..... LOUIS J. GILL, San Diego
"Co-operation with Other Architects" ..... CHAS. F. B. ROETH, Oakland
"Co-operation with Architectural Education" .....
..... WARREN C. PERRY, University of California School of Architecture
"Co-operation with Public Authorities" ..... JAS. S. DEAN, City Manager, Sacramento

Incidental Music, and Solos by:
EVA GRUNINGER ATKINSON, *Contralto*
PHYLLIDA ASHLEY, *Pianist*
AUSTIN W. SPERRY, *Baritone*

SATURDAY, OCT. 11

Morning: *Chairman,* A. M. EDELMAN, Los Angeles.
Business Session.
Round Table Discussion.
Illustrated talk on "Gardens"—MYRON HUNT, Los Angeles.
Start of Golf Tournament.
Putting Contest for Ladies.

Afternoon:
Golf Tournament, continued.
Visits to notable Pebble Beach Residences.

Evening: *Chairman* (Not Selected).
Golf Dinner.
Entertainment.

NOTE: Ladies will be welcomed to all functions.

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ter. The report of Mrs. Waldron and Mr. Hussey covers them in a way. But the Chapter requests that the present Commission list the reports left on file, such as the studies for a grouping of municipal buildings, the extended reports of the Rapid Transit Committee, etc., in such a way as to make them as available as possible to future Commissions, and in such a way that a permanent record is made of them.

Yours very truly,
American Institute of Architects
Washington State Chapter.
By Lance Edward Gowen, Secretary.

* * *

The next subject for consideration at the special meeting was the situation regarding the architectural design of the Aurora Avenue Bridge, Seattle, resulting from the resolution of the Chapter, authorized at the June meeting which was sent to the President of the Pacific Northwest Association of Planning Commissions and placed in the hands of the Committee on Public Information of the Chapter.

This resolution was as follows:

"WHEREAS: The beauty of such a bridge as the Aurora Avenue Bridge, Seattle, is of far-reaching civic importance, its vast sweep being visible for miles,

AND WHEREAS, in such bridges as the Hudson River Bridge in New York, for which Mr. Cass Gilbert is Consulting Architect, and in numerous other important bridges in the East of this country, the use of a competent architect to collaborate in the design has resulted in outstanding success,

AND WHEREAS, the beauty of a bridge is inherent in its fundamental lines, not alone in any superficial ornament which may be applied,

AND WHEREAS, it is the sense of this body that a professional City Planning Engineer should be employed in a study of the approach highways to the Aurora Avenue Bridge, and that the services of a competent architect should be employed in the approach structure of the bridge,

BE IT RESOLVED, by the American Institute of Architects, Washington State Chapter, that the services of a competent Consulting Architect should be used in this matter, and in all future bridges of importance, and that a professional City Planning Engineer should be employed to study carefully the street approaches to this bridge."

With reference to this resolution a letter was read from the State Director of Highways to General

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Robert Alexander, President of the Pacific Northwest Association of Planning Commissions, making complimentary references to the suggestions made by the Chapter to the engineers in charge of designing the bridge. The letter was referred to the Civic Design Committee.

* * *

The following members of the Chapter have been appointed on Institute Committees for the current year 1930-31: A. H. Albertson, Special Committee on Constitution and By-Laws; Charles H. Alden, Standing Committee on Competitions and Special Committee on Foreign Relations; Charles H. Bebb, Special Committee on Historic Monuments and National Resources; Roland E. Borhek, Standing Committee on Building; Carl F. Gould, Special Committees on Health and Safety and National Capitol; John Graham, Standing Committee on Contracts; Arthur L. Loveless, Special Committee on Honor Awards; James H. Schack, Standing Committee on Practice; Joshua H. Vogel, Standing Committee on Structural Service, and Andrew Willatsen, Special Committee on Industrial Relations.

SANTA BARBARA CHAPTER

Russell Ray was elected president of Santa Barbara Chapter, American Institute of Architects, at the annual meeting held recently. Harold Burket of Ventura, was chosen vice-president; E. Keith Lockard, secretary; and Leonard A. Cooke, treasurer. A continuation of lectures sponsored by the Chapter to be offered the public through educational organizations in the Chapter's territory is planned.

OPENS BRANCH OFFICE

A. M. Byers Company, manufacturers of wrought iron pipe at Pittsburgh, Pennsylvania, has established a branch office in San Francisco to serve the Pacific Coast States. Offices are maintained in the Crocker First National Bank Building. H. K. Browning is division manager.

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BUSINESS ON THE UP GRADE

A general improvement in sales has necessitated more office room and additional clerical force at the East Oakland plant of the G. H. Brown Hardwood Company. The changes include an enlargement of the general office which increased the total office floor space to 1320 square feet. The salesmen's desks have been placed in the added space and room has been provided for a complete range of samples of the various hardwoods and other products handled by the company.

George H. Brown, president, in commenting on business conditions, said that their sales for the first half of the year had been good, considering the reduced volume of new construction, but remarked that such a result was obtained only by putting forth the maximum effort.

Mr. Brown, referring to the growth made by Oakland since the census of 1920 said there can be no doubt of the fact that Oakland is destined to be an outstanding industrial city, and the industrial growth, together with its increasing popularity as a residential city, will insure a large increase of population, and in consequence a large volume of construction, in the next few years.

Mr. Brown is in full accord with the slogan of the Millwork Institute of California that "there is a distinct trend back to wood," and believes that there will be a definite increase in the use of both domestic and imported hardwoods for interiors of homes, apartments and business structures.

The Brown Company is distributor in the East Bay territory of Cellized oak flooring which architects are specifying for high class work. Each block is a complete unit, laid in Everbond, a plastic cement, directly over concrete.

HEADS WESTERN COMPANY

Arthur J. Swanson announces the formation of the Westeel Products Company with offices in the Rialto Building, San Francisco. Sales branches will be established in Los Angeles and Seattle.

The Westeel Products Company will represent a few prominent eastern manufacturers of building products as their western branch and factory distributor, including Knapp Brothers Manufacturing Company of Chicago, makers of interior sanitary metal trim; North Western Steel Products Company of Chicago, makers of steel shelving, lockers and Nemco expanded steel baskets; Receivador Sales Company of Grand Rapids, makers of "The Automatic Servant," etc.

Mr. Swanson was previously connected with the North Western Expanded Metal Company of Chicago and for the last two years as general sales manager. This move on the part of Mr. Swanson to return to California was prompted by his company being recently acquired by the United States Gypsum Company.

TO ENCOURAGE HOME BUILDING

Co-ordinated effort to remove influences which are depriving thousands of Americans of the advantages of home ownership was set in motion recently at the direction of President Hoover.

Privately financed, and with its studies directed at co-ordinating and stimulating private effort, rather than seeking relief through legislation, a national conference on home ownership and building has been called by the president.

Mr. Hoover pointed out financing conditions surrounding home building have been extremely bad and are particularly in need of adjustment. But this, he said, would be only one phase of the conference's work.

"Greater comfort and reduction in cost of construction in many parts of the country through improved design and the better layout of residential areas are all of first importance," the president said. "The expansion and betterment of homes in its bearings upon comfort, increasing standards of living and economic and social stability, is of outstanding importance."

One legislative angle which the president said needed attention, however, was the matter of mortgage laws of many states.

Mr. Hoover pointed out during the past months of depression there has been so acute a shortage of capital for home building that this branch of construction had fallen off greatly, while other forms of credit remained readily available. He noted particularly first mortgages had been affected by competition of bonds and other investments and in many cities second mortgages, necessary to many prospective home owners, had risen in rates to the equivalent of 20 and 25 per cent by the time commissions, discounts and other charges were figured in.

The president said the building and loan associations have been of great service in home financing, but were inadequate to carry the burden without aid.

The curtailment of home building construction, he said, was a notable cause of unemployment in the building trades.

Secretary Lamont will head the planning committee and John M. Gries, chief of the division of building and housing of the Commerce Department, will be executive secretary.

UNLICENSED CONTRACTORS TAKE HEED

According to J. R. Shields, Building Inspector of Sacramento, that city has set an example for all other cities of California by announcing that it will support the Registrar of Contractors in the enforcement of the State laws regulating the practice of architecture and civil engineering and providing for the registration of contractors. Permits will not be issued to unlicensed contractors. "Sacramento will require not only con-

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tractors, but civil engineers and architects, to show their state certificates," said the inspector in a communication to H. C. Morgan, deputy Registrar.

Following is the notice addressed by Inspector Shields to all applicants for building permits in the city of Sacramento:

"At the last Legislature three laws were passed concerning the building industry.

"It is illegal for any person to practice architecture in this state without a certificate, or to advertise that he is an architect. Any person may make plans for his own buildings, or may make plans (other than structural) for others if, prior to accepting employment or commencing work on such plans, the person furnishing the plans shall state in writing to the person for whom he is making the plans that he is not an architect.

"It is unlawful to practice civil engineering in this state unless such person has been duly registered. This means that all structural plans must be prepared and signed by a registered civil engineer or a licensed architect.

"Complying with the above laws, we will not accept plans and specifications unless they are signed by a licensed architect or a registered civil engineer, unless the proposed structure has no structural features, and the plans are accompanied by a letter stating that the maker is not an architect.

"Permits will not be issued to unlicensed contractors."

MEYN HEADS OWN COMPANY

Arthur H. Meyn, formerly salesmanager for the United States Metal Products Company of San Francisco, is now in business for himself and is operating under the name of the Arthur H. Meyn Company, with offices at 163 Second Street, San Francisco.

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LOS ANGELES THEATER

The Janss Investment Company has had plans prepared by P. P. Lewis, 1063 Westwood Boulevard, Los Angeles, for a reinforced concrete theater to be built in Westwood Village, at a cost of $300,000.

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts quoted are figuring prices and are made up from average quotations furnished by material houses to three leading contracting firms of San Francisco.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

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Mosaic Floors—80c per sq. ft.

Concrete Work (material at San Francisco bunkers) — Quotations below 2000 lbs. to the ton.

No. 3 rock, at bunkers	$1.40 per ton
No. 4 rock, at bunkers	1.40 per ton
Eliott pea gravel, at bnkrs.	1.40 per ton
Washed gravel, at bnkrs.	1.40 per ton
Eliott top gravel, at bnkrs.	1.40 per ton
City gravel, at bunkers	1.40 per ton
River sand, at bunkers	1.00 per ton
Delivered bank sand	1.00 cu. yd.

Note—Above prices are subject to discount of 10c per ton on invoices paid on or before the 15th of month, following delivery.

SAND
Del Monte, $1.75 to $3.00 per ton.
Fan Shell Beach (car lots, f.o.b. Lake Majella), $2.75 to $4.00 per ton.
Cement, $2.44 per bbl. in paper sks.
Cement (f.o.b. Job, S. F.) $2.64 per bbl.
Cement (f.o.b. Job, Oak.), $2.64 per bbl.
Rebate of 10 cents bbl. cash in 15 days.
Atlas "White" .....$ 8.50 per bbl.
Forms, Labors average 22.00 per M.
Average cost of concrete in place, exclusive of forms, 28c per cu. ft.
4-inch concrete basement floor.....13c to 14c per sq. ft.
4½-inch concrete basement floor.....14c to 15c per sq. ft.
2-inch rat-proofing....6½c per sq. ft.
Concrete Steps.....$1.26 per lin. ft.

Dampproofing—
Two-coat work, 20c per yard.
Membrane waterproofing—4 layers of saturated felt, $5.50 per square.
Hot coating work, $2.00 per square.

Electric Wiring — $2.75 to $8.50 per outlet for conduit work (including switches).
Knob and tube average $2.25 to $5.00 per outlet, including switches.

Elevators—
Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2500; direct automatic, about $2400.

Excavation—
Sand, 50 cents; clay or shale, $1.00 per yard.
Teams, $10.00 per day.
Trucks, $21 to $27.50 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—
Ten-foot balcony, with stairs, $65.00 per balcony.

Glass (consult with manufacturers)—
Double strength window glass, 15c per square foot.
Quartz Lite, 50c per square foot.
Plate 80c per square foot.
Art, $1.00 up per square foot.
Wire (for skylights), 27c per square foot.
Obscure glass, 25c per square foot.
Note—Add extra for setting.

Heating—
Average, $1.70 per sq. ft. of radiation, according to conditions.

Iron—Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg.site)
Common, $23.00 per M (average).
Common O. P. select, average, $30.00 per M.

1 x 6 No. 3—Form lumber	$20.00 per M
1 x 4 No. 1 flooring	42.00 per M
1 x 4 No. 2 flooring	40.50 per M
1 x 4 No. 3 flooring	35.00 per M
1 x 6 No. 2 and better flooring	41.00 per M
1¼ x 4 and 6 No. 2 flooring	50.00 per M

Slash grain—

1 x 4 No. 2 flooring	$35.00 per M
1 x 4 No. 3 flooring	33.00 per M
No. 1 common run to T. & G.	30.00 per M
Lath	4.00 per M

Shingles (add cartage to prices quoted)—

Redwood, No. 1	$ .85 per bdle.
Redwood, No. 2	.65 per bdle.
Red Cedar	.85 per bdle.

Hardwood Flooring (delivered to building)—

	13-16x2¼" T&G	⅜x2" T&G	5-16x2" Sq. Ed.
13-16x3¼" T & G Maple	$135.00 M ft.		
1 1-16x2¼" T & G Maple	145.50 M ft.		
⅞x3½ sq. edge Maple	132.50 M ft.		
Clr. Qtd. Oak	$220.00 M	$160.00 M	$178 M
Sel. Qtd. Oak	150.00 M	122.00 M	131 M
Clr. Pla. Oak	155.00 M	110.00 M	113 M
Sel. Pla. Oak	132.00 M	79.00 M	97 M
Clear Maple	147.00 M	101.00 M	

Laying & Finishing 16c ft. 15c ft. 13c ft.
Wage—Floor layers, $9.00 per day.

Building Paper—

1 ply per 1000 ft. roll	$3.50
2 ply per 1000 ft. roll	5.40
3 ply per 1000 ft. roll	8.00
Sash cord com. No. 7	$ 1.00 per 100 ft.
Sash cord com. No. 8	1.10 per 100 ft.
Sash cord spot No. 7	1.60 per 100 ft.
Sash cord spot No. 8	1.90 per 100 ft.

Sash weights cast iron, $50.00 ton
Nails, $3.25 base.
Belgian nails, $3.00 base.

Millwork—
O. P. $80.00 per 1000. R. W., $80.00 per 1000 (delivered).
Double hung box window frames, average, with trim, $6.00 and up, each.
Doors, including trim (single panel, 1¾ in. Ore. pine) $6.75 and up, each.
Doors, including trim (five panel, 1¾ in. Oregon pine) $6.00 each.
Screen doors, $3.50 each.
Patent screen windows, 20c a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., $5.50 each.
Dining room cases, $6.50 per lineal foot.
Labor—Rough carpentry, warehouse heavy framing (average), $11.00 per M.
For smaller work, average, $22 to $30 per 1000.

Marble—(Not set), add 50c to 65c per ft. for setting.

Alaska	$1.40 sq. ft.
Columbia	1.40 sq. ft.
Golden Vein Yule Colo	1.70 sq. ft.
Pink Lepanto	1.50 sq. ft.
Italian	1.75 sq. ft.

Tennessee ..... 1.70 sq. ft.
Verde Antique ..... 3.00 sq. ft.

NOTE—Above quotations are for ⅞ inch walnscot in large slabs f.o.b. factory. Prices on all other classes of work should be obtained from the manufacturers.

Floor Tile—Set in place.

Verde Antique ..... $2.50 sq. ft.
Tennessee ..... 1.50 sq. ft.
Alaska ..... 1.35 sq. ft.
Columbia ..... 1.45 sq. ft.
Yule Colorado ..... 1.45 sq. ft.
Travertine ..... 1.60 sq. ft.

Painting—

Two-coat work ..... 30c per yard
Three-coat work ..... 40c per yard
Whitewashing ..... 4c per yard
Cold Water Painting ..... 8c per yard
Turpentine, 78c per gal. in cans and 63c per gal. in drums.
Raw Linseed Oil—$1.20 gal. in bbls.
Boiled Linseed Oil—$1.23 gal. in bbls.

Carter or Dutch Boy White Lead in Oil (in steel kegs)

Per. Lb.
1 ton lots, 100 lbs. net weight 12¼c
500 lb. and less than 1 ton lots 12½c
Less than 500 lb. lots 13c

Dutch Boy Dry Red Lead and Litharge (in steel kegs)

1 ton lots, 100 lb. kegs, net wt. 12¼c
500 lb. and less than 1 ton lots 12½c
Less than 500 lb. lots 13c

Red Lead in Oil (in steel kegs)

1 ton lots, 100 lb. kegs, net wt. 13¾c
500 lb. and less than 1 ton lots 14c
Less than 500 lb. lots 14¼c

Note—Accessibility and conditions cause wide variance of costs.

Patent Chimneys—

6-inch ..... $1.00 lineal foot
8-inch ..... 1.50 lineal foot
10-inch ..... 1.85 lineal foot
12-inch ..... 2.10 lineal foot

Pipe Casings — 12" long (average), $7.50 each. Each additional inch 10c.

Plastering—Interior—

Yard
1 coat, brown mortar only, wood lath .. $0.40
2 coats, lime mortar hard finish, wood lath ..... .52
2 coats, hard wall plaster, wood lath ..... .55
3 coats, metal lath and plaster 1.00
Keene cement on metal lath 1.26
Ceilings with ¾ hot roll channels metal lath ..... .57
Ceilings with ¾ hot roll channels metal lath plastered 1.40
Shingle partition ¾ channel lath 1 side .62
Single partition ¾ channel lath 2 sides 2 inches thick 2.20
4-inch double partition ¾ channel lath 2 sides 1.30
4-inch double partition ¾ channel lath 2 sides plastered 2.45

Plastering—Exterior—

Yard
2 coats cement finish, brick or concrete wall $1.00
2 coats Atlas cement, brick or concrete wall 1.25
3 coats cement finish No. 18 gauge wire mesh 1.75
3 coats Atlas finish No. 18 gauge wire mesh 2.05

Wood lath, $4.50 per 1000.
2.5-lb. metal lath (dipped) ..... .19
2.5-lb. metal lath (galvanized) ..... .22
3.4-lb. metal lath (dipped) ..... .24
3.4-lb. metal lath (galvanized) ..... .29
¾-inch hot roll channels, $45 per ton.
Hardwall plaster, $15.40 ton; $12.95 in paper sacks (rebate 15c sack).
Finish plaster, $16.40 ton; in paper sacks, $13.85 (rebate 10c sack).
Dealer's commission, $1.00 off above quotations.
Hydrate Lime, $19.50 ton.
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $43.00 per M.

Composition Stucco—$1.60 to 2.00 per sq. yard (applied).

Plumbing—

From $60.00 per fixture up, according to grade, quantity and runs.

Roofing—

"Standard" tar and gravel, $5.25 per square for 30 squares or over.
Less than 30 squares, $5.50 per sq.
Tile, $19.00 to $35.00 per square.
Redwood Shingles, $11.00 per square in place.
Cedar Shingles, $10.50 sq. in place.
Recoat, with Gravel, $3.00 per sq.

Sheet Metal—

Windows—Metal, $1.80 a sq. foot.
Fire doors (average), including hardware, $2.00 per sq. ft. (not

Skylights—

Copper, $1.35 sq. ft. (not glazed).
Galvanized iron, 28c sq. ft. (not glazed).

Stone—

Granite, average, $5.50 sq. foot in place.
Sandstone, average Blue, $3.50; Boise, $2.60 sq. ft. in place.
Indiana Limestone, $2.60 per sq. ft. in place.

Store Fronts—

Copper sash bars for store fronts, corner, center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Steel Structural—$84 per ton (erected). This quotation is an average for comparatively small quantities
Light truss work higher; plain beam and column work in large quantities, less.
Cost of steel for average building (erected), $78.00 per ton.

1930 WAGE SCHEDULE FOR SAN FRANCISCO BUILDING TRADES

Fixed by the Impartial Wage Board

Craft	Journeymen Mechanics
Asbestos workers	$ 8.00
Bricklayers	11.00
Bricklayers' hodcarriers	7.00
Cabinet workers, (shop)	7.50
Cabinet workers, (outside)	9.00
Carpenters	9.00
Cement finishers	9.00
Electric workers	9.00
Electrical fixture hangers	8.00
Elevator constructors	10.00
Elevator helpers	7.00
Engineers, portable and hoisting	9.00
Glass workers	8.50
Hardwood floormen	9.00
Housemovers	8.00
Housesmiths, arch. iron, skilled all branches	9.00
Housesmiths, arch. iron, not skilled all branches	8.00
Housesmiths, reinforced concrete, or rodmen	9.00
Iron workers (bridge & structural) including engineers	11.00
Laborers, building (6-day week)	5.50
Lathers, channel iron	10.00
*Lathers, all other	8.50
Marble setters	10.00
Marble helpers	6.00
Marble cutters and copers	8.00
Marble bed rubbers	7.50
Marble polishers and finishers	7.00
Millmen, planing mill department	7.00
Millmen, sash and door	6.00
Millwrights	8.00
Model makers	10.00
Model casters	9.00
Mosaic and Terrazzo workers	9.00
Mosaic and Terrazzo helpers	6.00
Painters	9.00
Painters, varnishers and polishers (shop)	7.50
Painters, varnishers and polishers (outside)	9.00
Pile drivers and wharf builders	9.00
Pile drivers engineers	10.00
Plasterers	11.00
Plasterers' hodcarriers	7.50
Plumbers	10.00
Roofers, composition	8.00
Roofers, all others	8.00
Sheet metal workers	9.00
Sprinkler fitters	10.00
Steam fitters	10.00
Stair builders	9.00
Stone cutters, soft and granite	8.50
Stone setters, soft and granite	9.00
Stone carvers	8.50
Stone derrickmen	9.00
Tile setters	10.00
Tile helpers	6.00
Auto truck drivers, less than 2500 lbs.	5.50
Auto truck drivers, 2500 to 4500 lbs.	6.00
Auto truck drivers, 4500 to 6500 lbs.	6.50
Auto truck drivers, 6500 lbs. and over	7.00
General teamsters, 1 horse	5.50
General teamsters, 2 horses	6.00
General teamsters, 4 horses	6.50
Plow teamsters, 4 horses	6.50
Scraper teamsters, 2 horses	6.00
Scraper teamsters, 4 horses	6.00

*On wood lath if piece rates are paid they shall be not less than such an amount as will guarantee, on an average day's production of 1600 lath, the day wage set forth.

Eight hours shall constitute a day's work for all Crafts except as otherwise noted.

Plasterer's hodcarriers, bricklayers' hodcarriers, roofers, laborers, and engineers, portable and hoisting, shall start 15 minutes before other workmen, both at morning and noon.

Five and one-half days, consisting of eight hours on Monday to Friday inclusive, and four hours on Saturday forenoon shall constitute a week's work.

Overtime shall be paid as follows: For the first four hours after the first eight hours, time and one-half. All time thereafter shall be paid double time. Saturday afternoon (except laborers), Sundays from 12 midnight Friday, and Holidays from 12 midnight of the preceding day shall be paid double time. On Saturday laborers, building, shall be paid straight time.

Where two shifts are worked in any twenty-four hours shift time shall be straight time. Where three shifts are worked, eight hours pay shall be paid for seven hours on the second and third shifts.

All work shall regularly be performed between the hours of 8 A. M. and 5 P. M., provided, that in emergencies or where premises cannot be vacated for work by mechanics until the close of business, men then reporting for work shall work at straight time; but any work performed after midnight shall be paid time and one-half except on Saturdays, Sundays, and holidays, when double time shall be paid.

Recognized holidays to be New Year's Day, Decoration Day, Fourth of July, Labor Day, Admission Day, Thanksgiving Day and Christmas Day.

Men ordered to report for work, for whom no employment is provided, shall be entitled to two hours pay.

MILLION ENDOWMENT FOR A. I. A.

Edwin Bergstrom of Los Angeles, Chairman on Constitution and By-Laws of the A. I. A., recently submitted his report to the Board of Trustees of the Institute. In it Mr. Bergstrom stated that the program of the committee has embraced a complete study and revision of the constitution and by-laws. To quote verbatim from the report:

"While the work of study and revision had been brought well along towards completion it was by no means in final form when the committee was informed by Myron Hunt, former Regional Director of the Sierra Nevada Division, that a distinguished layman, interested in architecture and the allied arts, was seriously considering the establishment of an endowment fund of one million dollars, to be administered by the Institute under certain conditions. The attorney of this layman had advised that the by-laws of the Institute were not satisfactory or complete—with reference to the taking of and the administration of the proposed gift. Several members of the Board, and the chairman of the Committee on Constitution and By-Laws, met with the prospective donor on several occasions and agreed upon the general uses to which the income of such a proposed endowment fund could be most advantageously devoted. In Los Angeles in the last week of February, the prospective donor invited President C. Herrick Hammond, Vice-President James Monroe Hewlett, Edwin Bergstrom, Treasurer and Chairman of the Committee on Constitution and By-Laws, and Directors Myron Hunt and Fred Fielding Willson, to a conference and stated that, after full consideration of the by-laws of the Institute, the treasurer's reports to recent conventions, and the proceedings of recent conventions, it was apparent that the Institute was not prepared to administer in perpetuity the foundation contemplated. It was agreed, however, if the Institute would put its by-laws in satisfactory order, that the bequest would be completed because the traditions of the Institute, its history of unselfish accomplishments, and its national standing warranted the fullest measure of recognition and confidence."

By-law amendments intended to take care of the above situation were adopted at the last Institute convention.

NEW BUILDING MATERIAL

A building material which rises like bread to two and three times its original volume, is from 66 to 75 per cent lighter than concrete, and so hard that a weight of 370 pounds to the square inch leaves no impression on its surface, has disclosed unusual fire resistive properties in tests made by Prof. Albin H. Beyer of the Department of Civil Engineering, Columbia University.

The material is composed primarily of Portland cement and concrete with the addition of lime and a small quantity of aluminum powder and soda. When

THE recently completed International Building and the Memorial Stadium at University of California embody Soulé service in fabrication and installation of reinforcing steel. Casements for Life Science Building were furnished by United States Metal Products division of Soulé Steel Company.

SOULÉ STEEL COMPANY
San Francisco : Portland : Los Angeles

Specify
DICKEY CLAY PRODUCTS

The name "DICKEY" is everywhere recognized as a guide to Clay Products of uniformly high quality.

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THE STANDARD HOLLOW BUILDING TILE

Partition Tile	Face Brick
Drain Tile	Fire Brick
Veneering Tile	Paving Brick
Furring Tile	Step & Walk Brick
Fireproofing Tile	Wall Coping
Floor Tile	Flue Lining

DICKEY Flashing Blocks

W. S. DICKEY CLAY MFG. COMPANY
SAN FRANCISCO

Whatabout the pipes?

Ric-wiL Type DF showing multiple pipe support, Dry-poC insulating filler and the LocliP Side Joint.

An important question which Ric-wiL alone can answer to your complete satisfaction. For years ago our Engineers realized that the weight of the pipes, coupled with their movement through expansion and contraction, would not be successfully carried by the conduit itself. The bottom of the tile conduit—an inverted arch—was obviously the weakest type of construction to support a load.

Ric-wiL pipe supports, made of rust-proof cast iron, rest entirely on the Base Drain. Thus the weight and strain of expanding, contracting and pounding pipes are entirely independent of the conduit.

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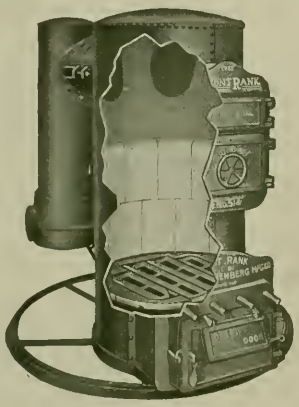

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Foremost in the warm air heating field is the "Front Rank" furnace. A steel plate, boiler-like heater encased in a sheet-iron jacket. Vapor pan automatically charges the air with the necessary moisture.

Its high efficiency at low cost of operation accounts for the 250,000 or more in use. Our engineers at your service—

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COAL OIL GAS FURNACES

poured out in a semi-liquid form, the aluminum powder generates hydrogen in the liquid mass. A layer of liquid floor filling two inches deep will rise within an hour to a height of five inches or more, drying rapidly as it expands.

The fire, load and water tests, which were conducted for the Bureau of Buildings of the City of New York and the State Department of Labor at the fire testing station maintained by Columbia University at Greenpoint, L. I., were applied to a floor made of this material. Half of the floor was laid to a depth of four and a half inches and the other half was ten and a half inches thick with a half-inch Portland cement mortar finish.

To simulate actual building conditions, the floor was subjected to a load of 150 pounds to the square inch. Since the maximum temperature in a burning building of modern fireproof construction has been found to reach an average of around 1,700 degrees Fahrenheit, the temperature of the furnace directly under the flooring was kept above that figure for more than four hours. During the last three and a half hours of the test, the temperature averaged 1,804 degrees, and at one time reached 1,910 degrees. These temperatures were taken near the under surface of the floor.

Temperatures on the upper surface of the thinner floor, which had expanded, due to the hydrogen, from an original thickness of two inches, rose only two degrees at the end of the first hour, although the temperature of the furnace below it averaged 1,566 degrees. During the last hour of the test, in which an average temperature of 1,825 degrees was maintained under the flooring, the top surface temperature ranged from 139 to 207 degrees.

On the upper surface of the thicker floor, however, one section showed no change in temperature at the end of the first hour. Another section of the floor surface was warmer by one degree, another by seven degrees, and a fourth section had actually dropped two degrees in temperature.

At the end of the fourth hour, the hottest surface temperature recorded at any point marked an increase of eleven degrees. The other sections showed increases of twelve, ten and eight degrees, although a fire hot enough to melt silver and copper was raging directly below the floor. Theoretically in a building constructed of this material, office staffs could have worked at their desks during the four hours with no intimation that a destructive blaze was under way within twelve inches of them.

As soon as the test was completed, Prof. Beyer reports, streams of water were turned on the flames and the concrete construction. Extra weight was then put upon the thinner section of the floor until the load averaged 450 pounds to the square inch.

Measurements showed that under such a weight the floor deflections ranged from 6-100 of an inch to

nearly two inches in one section. As soon as the load was entirely removed, the deflections ranged from zero to a little more than an inch and a half.

A weight of 600 puonds to the square inch caused the thicker floor to show deflections ranging from 6-100 of an inch to nearly 6-10 of an inch. When the load was removed, the deflections entirely disappeared in some sections, with half an inch in one section as the maximum.

EFFECTS STEEL WINDOWS

The revised simplified practice recommendation No. 72—Solid Section Steel Windows—may now be considered as in effect, according to a recent announcement made by the Division of Simplified Practice of the Bureau of Standards, Department of Commerce. This statement was prompted by the Division's receipt of a sufficient number of signed acceptances from manufacturers, distributors and users of steel windows to insure the general adoption of the program by the industry as a whole.

The most important changes made in this revised program are the substitution of nomenclature of commodity products in lieu of dealer stock; the addition of several sizes in both the pivoted and projected window groupings, and changes of types and eliminations in projected architectural windows.

SUNSET LUMBER COMPANY BUSY

Manager G. G. Pearce of the Sunset Lumber Company reports a perceptible improvement in business for his company the past month. Several large contracts have been taken, both for millwork and lumber. The company is doing all the millwork on the new Franklin school at San Jose as well as the Magnin mercantile store, Oakland, and the Fairmount Hospital addition. The large annex to the State Building in the San Francisco Civic Center is another contract which the Sunset Company has under way. Some important improvements have been made to the National mill plant at Fruitvale. The mill is now under one roof with new machinery installed for greater efficiency.

FLAX-LI-NUM INSULATING CO.

Announcement has been made that controlling interest in the Flax-li-num Insulating Co., St. Paul, Minn., has been acquired by F. H. Peavey & Company, one of the largest grain marketing organizations in the United States. The change in ownership has already taken effect.

H. B. Harden, for many years associated with the Johns-Manville Corporation and an executive of wide experience, has been appointed general manager and sales director.

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+ STRENGTH
SOSS N.Y.
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"BEAUTY WITHOUT INTERRUPTION"
COMPLETELY invisible when the door is closed. Flush doors - clean lines - no undesirable projections.
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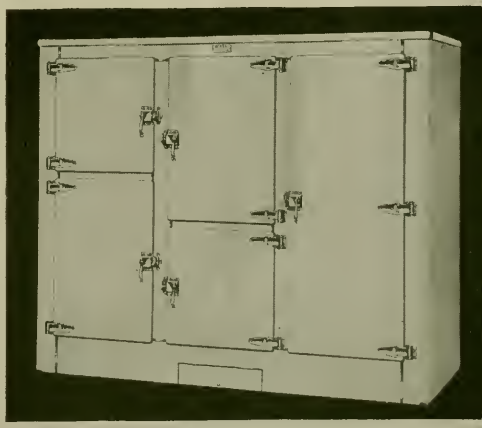

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Designed to answer a wide range of uses. A burner that will function properly at all times, giving maximum heat at minimum cost.

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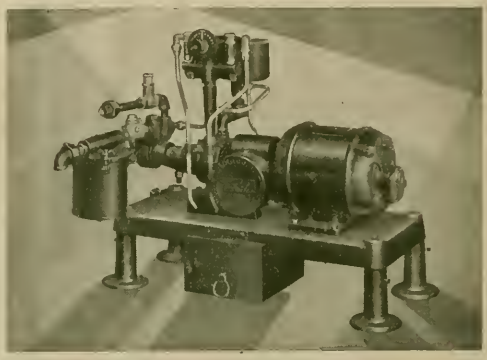

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A combination of beauty with convenience

The Mueller metal sink combination vividly illustrates the twin features of all Mueller plumbing fittings. The graceful design and chromium finish give it the beauty every modern woman demands in plumbing fittings. Convenient, too—because the spout can be swung over any part of the sink.

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